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2021
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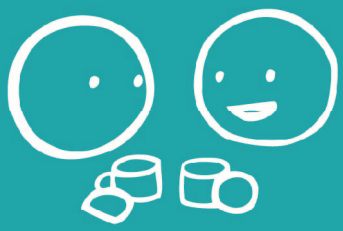
"Student life is so different this year"



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STUDENT SPACE

2021 Edition

Editor's column

The coronavirus pandemic has caused a fair amount of disruption for the UK's job market and there's no way to be 100% certain about what the future holds. However, the IT and technology sector has proven to be one of the most resilient, making it an appealing career choice for soon-to-be graduates. Many technology job roles, including software developers and QA testers, were able to operate with little to no disruption due to the ease of carrying out work online or remotely. Lockdown also reinforced how crucial technology is in allowing businesses and individuals to communicate, and the increasing importance of cyber security and data privacy professionals in a digital world.

Technology careers are for everyone, with more employers actively looking to employ students who don't have a science, techology, engineering or mathematics (STEM) degree. So, wherever you are in your job hunt and whatever your degree background or experience level, this publication is your essential guide to the sector.

- Learn more about the different roles you could have in the technology sector on pages 56–58.
- Make sure you've got the skills that employers are looking for, including programming languages (page 20) and soft skills (page 18). We've also broken down the research you need to do before you apply (page 24).
- Turn to pages 34–47 for advice on putting together a strong application and what to expect at interviews and assessment centres.
- Want a career in tech, but not studying computer science? Never fear, we have advice on how you can enter the sector on pages 8–9.

And there's plenty more advice to help you start your career in this publication and online at **targetjobs.co.uk/it**.

Rachael, editor

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Digital fix

Register with **targetjobs.co.uk** to:

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Why work in IT & technology?

The IT and technology sector is a fast-moving and exciting place to start your graduate career. We asked recruiters for their top reasons why a career in tech is for you.

1. You're in demand

Technology is a growing part of people's lives, in and out of work, and this trend isn't going to slow down or stop anytime soon.

2. IT's evolving... and you can too

The blockchains, internet of things and neural networks of today will soon become part of everyday life, to be replaced by the new developments. If you're motivated by change and opportunities to learn, technology is for you.

3. Pay and perks to shout about

Graduate salaries in the IT and technology sector tend to be quite good. The students who expressed an interest in IT and technology employers in The Graduate Survey 2020* expected to earn just over £27,500 after graduation – a realistic figure for larger tech employers.
IT and tech employers are also at the forefront when it comes to workplace perks. Free food, sleep pods, gym memberships and work/life balance initiatives are commonplace in larger technology organisations.

*Conducted by Trendence UK, a GTI business

4. IT roles are everywhere

Working in IT puts you at the core of any industry. Banking, media, healthcare, retail, science, intelligence services; you name it, IT is involved. Plus, there will always be new industries that IT paves the way for.

5. Tech is for everyone

IT is changing. Employers are making concerted efforts to increase diversity in the industry and there are more opportunities for graduates who don't have a technology degree.

Students' top ten tech employers

71,713 voted for their favourite graduate recruiters in The Graduate Survey 2020, conducted by Trendence UK, a GTI business. Here are their favourite IT and technology employers.

1 Google

2 Amazon

3 Microsoft

4 ASOS

5 Apple

6 Bloomberg

7 IBM

8 Accenture

9 Sky

10 Siemens

Find out more in *The UK 300* 2020/2021

Welcome to IT & technology

IN THIS SECTION

Browse your options in tech

The IT and technology industry is made up of a wide range of employers that operate in all types of business sectors. Understanding this space can help you identify a good assortment of companies that would suit your skills set, career aims and lifestyle. Plus, you'll impress graduate recruiters much more if you can show you have considered your options.

Know what you want from your job

With a wide range of options on offer, you need to know how to search for the right IT employer and career. Get started by considering two key factors:

1. **What type of work would you like to do?** Do you want to do loads of coding or none at all, but still use your technical reasoning? Would you prefer to be business focused, or enjoy the best of both the technology and commercial worlds? Do you want to be troubleshooting daily, or working on projects with longer deadlines? If you're not sure that you want to focus on one particular area from the outset, explore employers offering graduate programmes that allow you to work in different roles or business areas before you specialise.
2. **How mobile are you prepared to be?** Technology careers vary widely in terms of how mobile you need to be. Businesses may not be operating as they normally would due to the coronavirus (with many employees working from home). You should still consider what mobility might be required of you in future, or even if you'd prefer a role that allows you to work from home permanently. If you're looking to become a consultant, you could ordinarily expect to spend your working week wherever your current client is based, maybe catching a plane home for the weekend. Likewise, graduates in IT services may be required to spend the week on their clients' premises. In contrast, if you choose a very technical role such as developer or software tester, you'd usually spend the vast majority of your time in the same office with perhaps the odd trip out. Business and management-focused roles (eg project management) tend to fall somewhere between the two – they often require a degree of travel but this can vary depending upon the precise role and company. Try to assess honestly how mobile you are prepared to be. Several IT professionals have previously told TARGETjobs *IT & Technology* that travel and spending weeknights in hotels were their least favourite aspects of the job. Regular travel may seem glam at the start, but are you really happy to put week-time evening pursuits on hold?

Know what the employer wants from you

As you begin to establish what you want from your job and the type of organisation you'd like to work for, it's essential that you think about the requirements of the role and what the

employer wants from you as an individual. This will help you to determine whether you are truly a good match for the job and your chosen employer. It'll also make apparent the 'extra' skills and attributes that you'll need to bring to the table, as some students mistakenly assume they'll be able to walk into any graduate IT job because they have a computer science degree, for example.

Recruiters report that students applying for graduate jobs in technology roles are particular culprits for not taking applications and employability seriously enough.

Even if you've studied computer science and have been planning your career from day one of university, there are still some extra steps you can take to give yourself the best chance of securing a graduate job with your chosen company.

During your job hunt, make sure you think about the employers' needs – not only your own. Remember that:

- Demand for technologists is greater at experienced-hire level than entry level.
- IT recruiters tend to have requirements that go beyond what's taught in lectures.
- Many major players now demand at least a 2.1 degree, and in some cases a minimum number of UCAS points.
- Even if you've got the right skills, you still need to sell your understanding of and enthusiasm for a particular employer.

How to research sectors and employers

Read through the business sector overviews on page 58. These will give you a snapshot of the key technology sectors, and there are more online at **targetjobs.co.uk/it**. On page 56 you can find descriptions of ten of the most typical roles in IT. If you are considering jobs with smaller firms, read up on how to find roles with them on page 26.

Attend careers events (these may be run online due to social distancing guidelines), such as TARGETjobs' *IT's not just for the boys!* to find out about areas of IT from current employees. You can also find employer profiles and graduate job and internship vacancies online at **targetjobs.co.uk/it**.

Types of IT employer

Large IT employers include technology solutions providers, IT services organisations, telecoms companies (technology and service providers) and technology consultancies. Other significant IT employers include finance and professional services firms, such as investment banks, retail banks, investment management firms, insurers and accountancy firms.

Retail, media, games development and public services organisations as well as engineering firms are also major recruiters in the IT employer landscape. And there are many smaller technology employers, such as specialist software companies and niche consultancies. But, potentially, you could start your IT career in any type of business.

No computer science degree? No problem

You can still start a graduate career in IT and technology if you're not studying computer science or an IT-related subject at university. IT recruiters have previously told us that most of their graduates come from a more general STEM (science, technology, engineering and mathematics) background and a small number from a non-STEM background. You will just need to convince recruiters that you have the desire and ability to learn.

Why consider this route?

There are advantages to going into IT with an uncharacteristic background. If you think about it, different degree subjects tend to develop different skills sets and ways of thinking. For example, a music graduate is likely to have strong pattern recognition skills, while an English graduate may have strong analytical skills and be able to spot mistakes.

Many companies appreciate that hiring graduates from a range of degree backgrounds brings its own benefits. Businesses can generate more ideas and outsource less if they have a diverse workforce, as opposed to everyone having the same skills set.

Technology skills are also applicable to every sector and industry. Choosing a technical career does not rule out working in a non-STEM-related industry. Starting your career with a tech company can set you up for future career success.

What training do graduates receive?

Having the right technical skills as a graduate is still essential, but employers who take on non-IT graduates are willing and prepared to invest time in training you.

How employers choose to train their graduates varies but usually involves a combination of 'classroom' learning and working on projects. It's common for graduates to go through an initial induction period when they first join a company. This is often when you are taught how to code. An induction could last around ten weeks and allows new joiners to learn at a comfortable pace, ask lots of questions and have a high level of support before moving onto project work.

What are employers looking for?

Entry requirements vary from employer to employer so it's important that you look at individual job descriptions for each job you apply to. Some employers ask for all applicants to have a 2.1, for example.

Crucially, pay attention to the skills the employer wants to see evidence of. These skills don't have to be developed through technology-related experiences; you may have already picked them up through your degree course, extracurricular activities or other work experience, such as part-time jobs. Don't neglect these experiences when you're looking for evidence of skills to mention in applications and interviews. Find out more about the soft skills that IT recruiters look for on page 18.

Even if you've not studied a STEM-subject at university, it's still important that you show recruiters that you have an interest in, and a passion for, technology. Being able to point to classes, online courses, events, volunteering or work experience that show you are taking opportunities to learn more about technology will help prove to recruiters that you are the right person for the job. Take a look at page 20 for more ways that you can start growing your coding skills.

Confirm your choices with work experience

Keep a look out for technology-related internships and work experience opportunities that accept applications from non-STEM students. Not only will a tech internship on your CV show recruiters that you're seriously considering a career in IT, work experience will help you to confirm whether a technology graduate career is the right choice for you. It hasn't been easy for employers to offer work experience due to the coronavirus and the country-wide lockdown, but it should come as no surprise that tech employers have been leading the way in offering virtual internships to students. You can find out more about virtual internships at **targetjobs.co.uk**.

Your career action plan

We'd normally recommend following this plan of action over the course of the academic year. Just bear in mind that while some activities will carry on as normal or be adapted online, some will be on pause for now.

Non-finalists

2020

Autumn

- Apply for any work experience opportunities for 2021.
  Some employers won't take students until their penultimate year. Application deadlines can be before Christmas and many recruiters will not wait till the closing date to start filling places.
- Grow your skills by joining a university club or society. Committee or leadership positions will develop valuable transferable skills. You can also show off your passion for IT and learn technical skills through extracurricular activities – find out more on page 30.
- Register on **targetjobs.co.uk** to receive job alerts, save your favourite jobs and internships to your personal dashboard and maybe even get headhunted if you upload your CV.

2021

Final-year students

- Apply for graduate jobs and schemes. Some have application deadlines before Christmas, but apply early – many schemes will start filling places as they receive impressive applications.
- If you want to pursue postgraduate study, applying in the autumn term is ideal. Popular courses fill up quickly and for some universities you need to accept a place before you can apply for funding. Funding deadlines vary widely so getting onto a course earlier may give you more options. Learn more about your postgrad options on page 50.

Autumn

Winter

- Some work experience schemes will still be open for applications. If you've not secured work experience yet, don't miss out on applying.
- Do a skills audit. Make a list of the technical and transferable skills you already have and where you gained them (eg personal projects, group work, volunteering). Use this publication to find out where your skills gaps are and actively look for opportunities to work on them.

Spring

- Got any choice as to your modules or projects for next academic year? If so, find out which options would tie in best with the work of employers who interest you. You can always phone the company's recruitment team if this information isn't provided on its website.
- No luck finding an internship? If you are hoping for a trip abroad this summer (coronavirus allowing), organising some independent travel is likely to develop your planning and problem-solving skills, which employers will like. It may also provide job interview-appropriate experiences to talk about.
- Investigate other options for the summer vacation. Top of your list should be technology-related experience such as a temp job in IT support or a few days of work shadowing. However, any job or voluntary role will help you to develop transferable skills.

Summer

- Doing an internship, job or voluntary role? Keep a record of what you do, who you work with, any improvements you make and any challenges you help overcome. This will help with applications and interviews later on.
- If you've not had any luck finding work experience, consider initiating your own IT project for the summer – could you design and develop a website, app or database that would be useful to you or your family and friends? This is also a great way to gain evidence of your passion for tech.
- Research the employers that interest you for internships or graduate jobs and check when their applications open so you are ready to apply in the autumn.

- Keep applying for graduate schemes. Some will accept applications into the new year or have 'open' deadlines (though they will still close once they've recruited enough people).
- Make any remaining applications for postgraduate study or funding.
- Prepare for interviews and assessment centres. Ensure you factor in time for assessment centres and interviews alongside your university work. Have a respectable interview outfit at the ready. Turn to pages41–47 for more interview and assessment centre tips.

Winter

- Ensure you do your absolute best in your exams – take a break from job hunting if needs be. With a 2.1 you will be eligible to apply for many more jobs than with a 2.2.

Spring

- Look out for immediate vacancies with small employers that might pop up. You can read about the benefits of starting your career small on page 26.
- Don't neglect internship opportunities just because you're about to graduate. If you still feel like you need to gain experience before applying for jobs, keep an eye out on TARGETjobs or check organisations like Step (**step.org.uk**).
- Got a job? Congratulations! Give yourself a decent break but make sure you're prepared for work so as to make a good impression from day one.

Summer

Internships and work experience

IN THIS SECTION

Your tech work experience options

Don't miss:
targetjobs.co.uk/internships for more help and opportunities.

It's no secret that recruiters like to see more than just a degree on your CV, and there are usually a few different types of work experience you can gain to give your graduate tech job hunt a boost. However, employers realise that the Covid-19 pandemic has posed considerable challenges to gaining this experience. Some of the options recommended below may not be running normally this year, but this won't be held against you when applying for jobs. Check regularly to see what's available, such as virtual internships, and speak to employers directly (for example at virtual careers fairs) to seek out more information and advice.

It's usually best to apply for work experience in the autumn term for roles beginning the following summer. Some opportunities, however, remain open throughout the spring or pop up throughout the year.

Internships

These typically last between six and twelve weeks and are designed to fit into the summer vacation between your penultimate and final years at university. Some internships might also be open to applications from first-year students.

Internships tend to be paid, structured schemes at larger employers where you will have a defined role for the duration of the scheme. You will have the opportunity to experience working life as a tech professional and develop your technical skills in a practical setting. Virtual internships are designed to give you a similar experience online, but are typically shorter in length.

Placement years

For a really in-depth experience of what your career could be like, you could do an industrial placement. This involves working at an employer full time for twelve months and is intended to fit into a sandwich degree course. However, if you think you'd benefit from a placement year, you may be able to take a year out from your degree with your university's permission.

First-year schemes

An increasing number of employers (especially in the finance and professional services industries) normally offer short work experience schemes for first-year students. These are also known as insight weeks or open days. They typically last for either a day or a week and offer first-year students the opportunity to get an initial taste of technology careers and meet IT professionals. Some employers also run similar schemes for specific groups, such as for women interested in tech careers.

DID YOU KNOW?

You can also develop your tech and soft skills through **extracurricular activities** – turn to page 30 to find out more.

IT temp jobs

Small and medium-sized enterprises (or SMEs) sometimes have paid temporary positions suitable for students that aren't labelled as 'internships'. These may be a good choice if you've not been able to secure a more structured internship scheme. You may be able to find these jobs through a temping agency, your university careers service or through approaching an employer directly with a speculative application. Find out more about working at an SME on page 26.

Work shadowing

While it might not be as impressive in a graduate job application as an internship, work shadowing is a way to show employers that you are actively exploring IT careers. Work shadowing is a form of informal work experience where you will observe a professional doing their day-to-day job, and will likely be unpaid. You might be able to find work-shadowing opportunities by approaching local employers or through your network, friend and family connections, or your university careers service.

Part-time jobs and non-tech experience

You don't need to focus all of your work experience attention on the tech sector. A part-time job or an internship in another sector are sure-fire ways to develop your **soft skills** and workplace experience. While all experience will be a benefit to your CV, any job that is client facing or involves explaining technical concepts to non-technical people will be particularly useful for many tech careers. See what other soft skills you'll need on page 18.

Why do an internship or placement?

- Develop your technical, business and interpersonal skills in a workplace setting.
- Explore your career options.
- Gather evidence of your interest in a career.
- Build a network of industry contacts.
- Practise for applications and interviews.
- Earn money and experience the perks that employers offer.

Getting the most out of work experience

Put the most into your internship or placement to get the most out. If you are particularly impressive, your employer could even fast-track you through the application process for graduate jobs – for example, by inviting you to attend an assessment centre straight away.

- Be seen as a proactive team member – for example, if you report a problem, try to also suggest a solution.
- Request feedback on the work you do and on your overall performance.
- Put yourself forward for opportunities.
- Keep notes of what you do and who for – these will serve as a helpful reminder for future applications.
- Don't just mingle with other interns – chat to people from across the business and make the most of social events.

Skills & networking

IN THIS SECTION

The soft skills IT employers want

Skills such as communication and teamwork are just as important for IT employers as they are for employers in any other sector. Many technology companies acknowledge that soft skills might be lacking among some graduates and will therefore test these capabilities in prospective employees. You should make sure you have the full range of soft skills and be well equipped to demonstrate them during the application process for jobs.

Whether or not an employer is explicitly looking for particular soft skills, they will improve your chances of securing a graduate job. For example, communication skills will be beneficial during interviews, as they will enable you to clearly and confidently showcase your knowledge and experience. You may be required to work with other people at assessment centres, and the ability to cooperate with others will not only show that you're a team player but it will mean the work you produce will be of a higher standard. At their core, soft skills allow your technical knowledge and abilities to translate smoothly to the workplace.

Communication

IT professionals communicate with people across all levels of an organisation. In client-focused roles they must communicate verbally with clients to understand and define system requirements.

How do you demonstrate this skill?

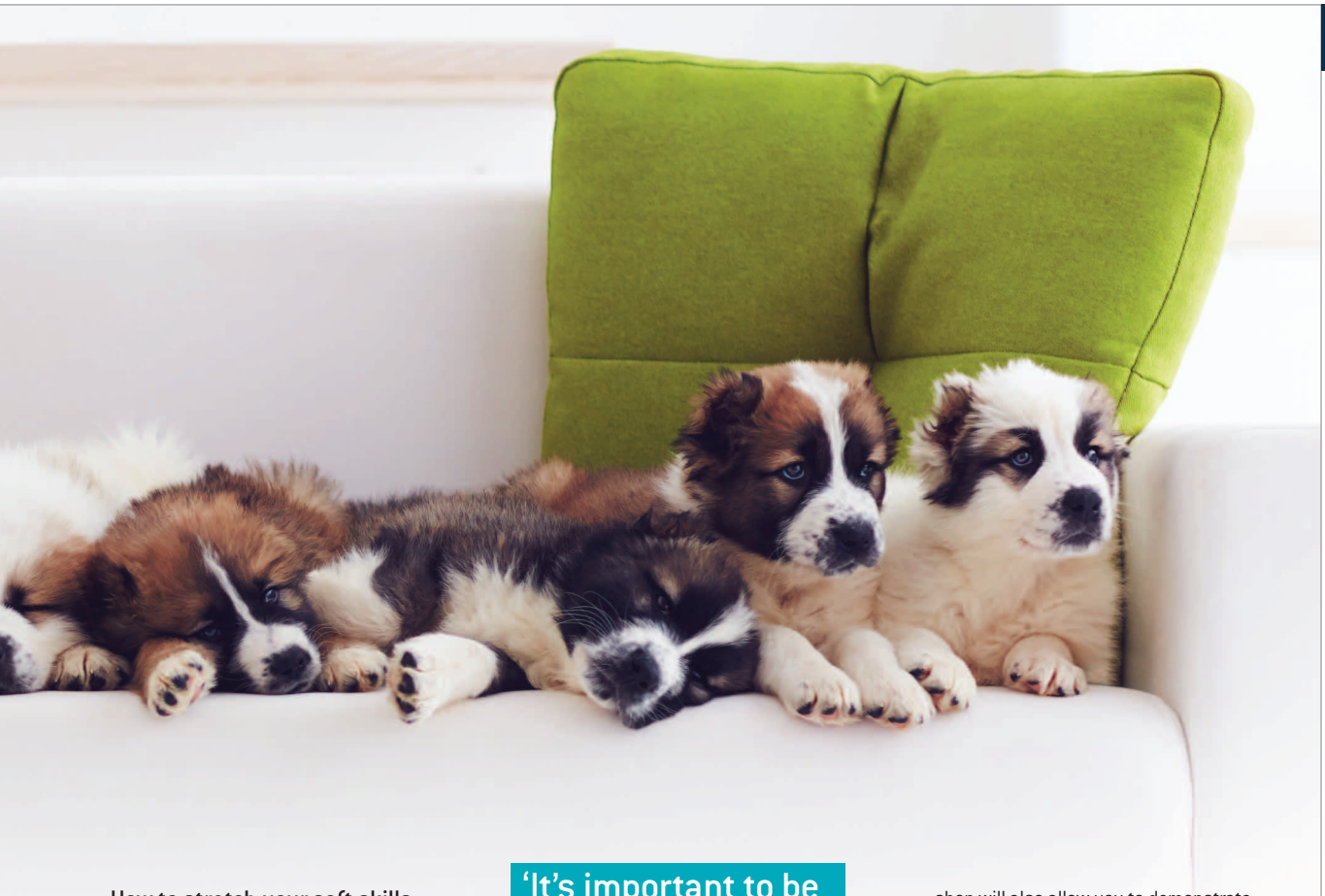
- Keep verbal and written communication clear and appropriate for the audience.
- Listen to and consider the views of others.

Problem solving

To work in IT you need to be able to identify, discover the reasons for and develop strategies to overcome problems. You may also suggest enhancements to existing processes to deliver improved service and a better product.

How do you demonstrate this skill?

- Show you take a logical approach to problem solving.
- Highlight your ability to anticipate and avoid pitfalls.



How to stretch your soft skills

- **Take an active role in a club or society at university**
  This will give you plenty of experience in communicating with others and working cooperatively as part of a team. Many positions in student societies will require you to think strategically and to solve problems, too. For example, as a treasurer for a sports club, you might work out ways to plan trips with limited funds.
- **Take on responsibility when doing activities in a group**
  Even when you're carrying out activities with friends, you can develop your organisation and problem-solving skills. Try to take a proactive attitude and consider how you can use your talents to play a useful role. You might help to organise a friend's surprise birthday party by creating a spreadsheet and logging progression (eg who has been invited and who is bringing food or decorations).
- **Get a part-time job while you're at university**
  One of the ways you can show prospective employers that you're able to organise your time effectively is by balancing studies with a part-time job. Work in a café, bar or shop will also allow you to demonstrate teamwork and communication skills.
- **Think strategically about how you might/will overcome problems you come across in your everyday life**
  By being curious and considering potential approaches, you will improve your problem-solving ability. During a work experience placement, take in what is going on around you – think about how other industry professionals are tackling complications and what you would do similarly or differently.
- **Think about the aspects of IT you find interesting and carry out extra research on these subjects**
  It's a good idea to keep a regular log of the things that interest you about IT and technology – including ideas and information you come across at university, in your everyday life, in the news and through extra research. By reading back through these notes during preparation for an interview, you will be able to demonstrate passion and enthusiasm for IT.

'It's important to be able to listen and understand, as well as explain technology at an appropriate level for the audience.'

Planning and organisation

You will have to balance different projects as part of an IT job, each with a different deadline and level of priority. Planning will also help you to anticipate challenges and gauge how to deal with them.

How do you demonstrate this skill?

- Highlight how you scope out an activity and allocate time to individual tasks.
- Demonstrate your ability to anticipate challenges and plan contingencies.

Teamwork

Teamwork is essential for sharing knowledge and making sure your colleagues feel supported enough to contribute their skills and efforts. A strong team player works cooperatively and can manage others when needed.

How do you demonstrate this skill?

- Show how you have worked well in a team to achieve a final goal.
- Consider what motivates others and respect alternative views.

Search: TARGETjobs IT

Programming languages employers want...

Studying a computer science course or a related degree? The topics and modules that are taught across computer science degrees, as well as how they are taught, are likely to vary quite widely between universities. So, there is always room to improve your skills beyond the classroom.

If you're not studying for a computer science-related degree, a career involving coding is still an option for you. A handful of employers will train graduates with no coding experience in the languages they need for the role (see pages 8–9).

You can also increase the number of employers you can apply to by learning a programming language in your own time. Attending classes or learning through online courses is also a great way to build up evidence of your passion in technology – a key quality that recruiters want to see in graduates.

What languages do employers look for?

Different employers' requirements vary widely, so always make sure you've done your research before applying.

- **Capgemini** has previously told TARGETjobs that knowledge in Java, JavaScript, Python, SQL, C#, Ruby and PHP would all be of value.

- **BlackRock** has previously told TARGETjobs that, while they primarily work with Java, any object-oriented language (such as Python, JavaScript or C++) would be beneficial.
- **Morgan Stanley** specifies that its graduate technical analysts need to have an understanding of operating systems, as well as good knowledge in at least one programming language, offering Python, C++ and Java as examples.
- **Tessella** states that its data scientist and software developer graduate roles require applicants to have experience in one of the following languages: Java, Python, C, C#, C++, R or Matlab.
- Many of the employers we've spoken to specified that, while they may not ask for specific languages, it's beneficial for graduates to have learned the fundamentals of at least one language.

...and how you can learn them

You can develop your knowledge of coding languages in a number of ways. If you want to learn a language from scratch, try out one of the many free courses and resources available online, on websites such as Coursera, Codecademy, or FutureLearn.

Even if you are not studying computer science, there may also be opportunities for you to gain experience of programming languages as part of your course.

Develop your skills further

Once you've got the basics of a language down, what you want to do is develop and deepen your knowledge of it. Start coding in your spare time, building your own projects and gradually increasing the complexity. If you already know one language, learning another can be fairly straightforward.

When choosing an additional language to learn, it's worth taking some time to think over your options. Select a language that is likely to be useful in your future career and bring something a bit different to projects you are working on.

You can join groups so you can compare your findings and experiment with what works well. Gaining experience of developing in a team is also beneficial for your future career. Look out for hackathons, open-source projects and coding competitions that you can get involved in and gain experience of coding in groups. Make use of the mentors at these events, as they'll help you design and build on an idea.

Work experience, placement years and internships are excellent ways for you to learn more about coding languages and how they are practically applied in the workplace. This is also an opportunity to build your network and experience first hand what the culture and values of the different employers are: an important thing to keep in mind when choosing who to apply for.

Promote your coding skills

However you develop your coding skills, you should make sure that recruiters know about it. You can talk about attending hackathons and events, or completing personal projects, on applications or in interviews. Upload examples of projects onto a GitHub profile and include a link on your CV so that employers can take a look at your code. Recruiters will be impressed to see and hear evidence of how you've approached a problem and how you've applied your technical knowledge in practical situations. ◎

Proving that you have a passion for technology

Whether you're applying for a technical role or a more business-focused role, there is one thing that technology recruiters will definitely be looking out for: passion for technology. Demonstrating your enthusiasm for technology throughout the application process will show recruiters that you can be a strong ambassador for their company's products and services.

What is passion for technology?

Passion for technology is not the same thing as technical experience or knowledge: you don't necessarily need to know a programming language or have studied computer science. Instead recruiters want to hear about how you have responded to, and appreciated, experiences with technology in your own life.

How do recruiters assess it?

Some employers may ask you directly about your passion for technology, either as a written question in an application form or during an interview, but for other employers you may have to demonstrate your enthusiasm through your CV, covering letter and assessment centre exercises.

Be warned: don't be tempted to stretch the truth or exaggerate your interest. Any experiences you write about in your application are likely to be brought up again throughout the application process, and recruiters will be able to tell when you're making something up on the spot.

What can you do to make your passion shine?

Make sure you can convince recruiters that you are passionate about tech by following these four tips:

1 Think about how you use technology

Consider how technology has made your life better or easier, or transformed how you approach problems. Think about everyday challenges that you have encountered and how technology has helped you to overcome or bypass these. This can be as simple as using a health tracker to track your progress while exercising, reading digital versions of course books on an e-reader or using apps to keep track of your budgets.

Think about how your experiences have informed your decision to work in technology and at the employer you are applying for. In interviews and assessment centres, you can extend this to thinking about potential technology solutions. For instance, in a case study exercise, you might come up with a new way in which the employer's technology can be used to solve an existing everyday problem.

2 Think about how you share technology

When you're passionate about something, you want to share it with others, so using examples of how you have shared technology is another way to demonstrate passion. You might have volunteered to teach coding skills to school students, been involved with tech literacy workshops for elderly people or you might have bonded with strangers over a coding challenge at a hackathon. Communicating technical concepts to people without a technical background and being able to work in a team are key facets of many jobs in the sector. As well as proving your passion, examples such as these show that you'll be able to succeed as a graduate employee.

3 Demonstrate how you've applied your tech skills

If you have taken the time to learn a programming language or other technical skills, either in your own time or during your degree course, show that you've used these skills in real-life situations at home, during a part-time job, or in personal or university projects. Recruiters want to see that your passion for technology extends outside of the lecture theatre and into extracurricular activities and your spare time. Perhaps you've offered your services making websites for friends and family, used technology to organise group work on your course or developed and sold apps on online marketplaces.

4 Strengthen your answers by giving details

It's a good idea to give as many examples as possible, but you should also provide details. For each example you pick out, elaborate on why this experience in particular was important for you and why it motivated your decision to work in IT and for the employer you are applying to.

Before you apply: your research checklist

There's no getting around it, before you start writing up an application for a graduate job or internship, you need to do your research. Not only will it help you to feel confident about the job-hunting decisions you make, but recruiters will expect you to have an understanding and awareness of their organisation and industry and may even directly ask you 'What do you know about the company?' at interview. But what exactly do you need to know? Check our handy checklist for an idea of what questions about an employer you want to be able to answer before you apply.

What do I do with this information?

Once you've done this research it can be tempting to just parrot statistics back during interviews, but it's not about telling a recruiter how many employees they have in different countries.

The best candidates will use their research as a springboard to explain **why they want to work at this employer in particular** in their own words. Look at the results of your research and combine this with your own thinking to decide what in particular about a company appeals to you.

Don't just wait to be asked about your research; thread the conclusions from your research throughout your application form answers, CV, covering letter and interview answers.

Company basics...

- [ ] What does the company do (products made or services provided)?
- [ ] Where is it located (where is its headquarters and its other offices)?
- [ ] What are the key moments in the company's history?
- [ ] Who are the company's main competitors? How do they differ?
- [ ] Where does it operate and in which markets?
- [ ] How, where and why is it growing?
- [ ] What does it offer that makes it unique in comparison to its competitors?

In the news...

- [ ] Are there any major news stories that are likely to affect the work of the employer, and how?
- [ ] What is the company's big news from the last year or two: new launches, current projects, mergers and acquisitions?
- [ ] Are there any patterns (such as annual cycles) that the industry follows?

The graduate job...

- [ ] What roles are available for graduates? What does the scheme or job involve?
- [ ] What are the minimum job requirements: are specific degree backgrounds or classifications required?
- [ ] What are the general competencies and specific skills that are asked for?
- [ ] What technical knowledge or skills would be beneficial? For instance, do you need to know a programming language?
- [ ] How does the role fit into the overall business?
- [ ] What training will you receive on the graduate scheme? How do these help your overall career ambitions?
- [ ] Are there any opportunities for travel or secondments with other businesses?
- [ ] What have previous graduates at the company gone on to do?
- [ ] What does the recruitment process involve: a CV, application form, interviews, assessment centres?
- [ ] What are the contact details for applying?

About the company culture...

- [ ] What are the company's 'core values' and aims?
- [ ] How is the firm's reputation within the sector?
- [ ] How does the firm portray itself – what image does it put forward in the media and on social media?
- [ ] Are there opportunities for socialising at the employer? Do they have sports teams, networking groups or team events?
- [ ] How do you view the organisation – what attracts you to it?
- [ ] Why does working for the employer appeal to you?

Where to start your research

- **Your own notes:** if you've done an internship or placement at the employer you're applying to, look back over your notes from these experiences. What stood out about its culture, work and people?
- **Visit TARGETjobs' employer hubs:** the employer hub pages at **targetjobs.co.uk/employers** provide information about employers, their graduate jobs, and expert 'how to get hired' advice on navigating their application processes.
- **Employers' websites:** look at press releases, product overviews, projects, information about the company's culture, and market information.
- **Newspapers:** build up a fuller picture of employers and industry trends, and follow stories over a number of weeks – don't just read the front page, check out the business and technology pages.
- **Industry websites:** sites such as **techrepublic.com**, **wired.co.uk**, **itpro.co.uk** and **computerweekly.com** are good industry insights. You can also sign up to email newsletters or read technology blogs.
- **Social networks:** follow technology news providers, websites, employers and professionals on Twitter. Join relevant groups on LinkedIn and engage in discussions to deepen your knowledge.
- **Your university careers service:** your university will have information on employers and will interact regularly with recruiters and alumni. Check out when careers fairs and employer presentations are happening (these may be held online due to the coronavirus).

Big opportunities in small IT companies

Small- to medium-sized enterprises (SMEs) are vital to the UK economy and the job-hunting graduate. In 2019, the Federation of Small Businesses reported that there were 5.8 million small businesses in the UK, which employed around 16.6 million people. In fact, many new graduates are more likely to get their first IT and technology job at a small employer, rather than at a larger graduate employer. So, it's important that you don't neglect this rich vein of future job opportunities.

Tracking down SMEs

Finding entry-level jobs in technology SMEs requires you to look in the right place. Look on specialist IT job boards and, of course, on **targetjobs.co.uk/it** for trainee and junior positions.

University careers services are an important port of call for SME job hunting. Many build close links with local employers for both full-time and work experience vacancies. They may be advertising technology opportunities or they might be able to let you know how to get in contact with a local employer. You can also find temporary placements in SMEs via Step (**step.org.uk**) and Scotgrad (**scotgrad.co.uk**).

It's worth checking out the local science/business park. Many small tech firms reside in business parks outside of major city centres. Go to the United Kingdom Science Park Association website (**ukspa.org.uk**) to track down those near you.

Networking can be a big help when looking for a job with an SME: speak to your friends, family, tutors and

Search: TARGETjobs IT

people on your course to see if you can get any leads. You can find out tips on how to start networking on page 28.

Applying to small companies

Speculative applications are one of the main routes into smaller companies. Your covering letter will be your first point of contact, so it's important that it's concise and gives details of what you can offer the organisation, rather than what you want to get out of them. Find out who's responsible for recruitment and address the letter to them directly. Read our advice for writing covering letters on page 34. Always follow up on a speculative applications with a call a few days later. Find more advice on making speculative applications at **targetjobs.co.uk/careers-advice**.

When responding directly to advertised positions, carefully read the instructions about how to apply and make sure you match your skills to those requested in the advert or job description. Take a look at the technical CV and interviews advice on pages 36 and 41 for tips.

SMEs are likely to take into consideration your experience, individuality and creativity rather than simply your academic achievements. As such, it's important to sell yourself and your skills well in your application. Make the effort to tailor it to the specific company and role that you are applying for and you'll have more success landing the job.

Why start your career small?

As SMEs will hire fewer people than large multi-national tech companies, you can expect a closer-knit working environment, more accessible managers and more open working culture. At the same time, you'll likely find that employees at smaller employers are often given more autonomy and responsibility early on in their career and that it can be easier for their individual contributions to be recognised.

SMEs are characteristically agile businesses and their employees may be more adaptable and capable of working across a range of roles or business areas.

Training tends to be more informal than on a large graduate programme and most of it will likely be done on the job. As such, it can be a great way to build a broad range of experience and knowledge quickly. For instance, at a tech start up, you might also get an insight into the business side of running a company.

You may also be able to work in a more specialised field at a smaller employer. If you are interested in, and want to gain experience in, a specific area of software or hardware, you may be able to find a smaller employer (such as a niche software house or start up) that focuses on just that.

The four best ways to network your way to a job

Networking can help you find a job for when you graduate. That's the ultimate aim, but other benefits include picking up some of the technical and soft skills that you'll need in an entry-level IT job. The great thing about networking as a student is that there are multiple ways to go about it. Here we outline four of the best if you want to go into IT and technology.

'It's worth utilising these unique opportunities to connect with technology employers.'

1 Network with employers through your university

A number of IT employers are involved with graduate recruitment fairs where they set up a stand or exhibit at the university and meet its students. Many universities are running virtual careers fairs this year due to coronavirus. Several well-known IT employers have also been known to visit universities to run employer presentations and informal networking and skills sessions. These may well move online too. You can usually find out about an employer's activities on its website (some, for example, have an events calendar) and through your university's careers service.

It's worth bearing in mind that on-campus activity is usually carried out by large IT organisations that recruit a lot of graduates each year. A smaller organisation, on the other hand, that takes on five graduates each year, is unlikely to use events, on-campus or otherwise, as part of its student/graduate engagement and recruitment drive.

2 Network during internships and employer events

Don't neglect work experience (such as internships or placements) when it comes to building your network. You'll still be able to do this even on a virtual internship. Grab hold of opportunities to meet new people from across the company – don't just talk to other interns or placement students. Make a note of the people you worked with and, at the end of your time at the employer, drop them a thank you note and ask if you could stay in contact.

Similarly, several employers run shorter insight events, designed to allow students to find out more about IT roles, the employer and to start building up their professional network. For example, Deloitte runs a two-day 'Spring into Deloitte' programme and KMPG runs a 'Women in Technology' insight scheme. These events typically comprise of networking with a range of staff (from graduate hires to partners), business games and skills sessions. The coronavirus may have affected employers' plans for events this year so check their individual websites and talk to your university careers service to find out if and how events are running and what the entry requirements are.

3 Network by joining specific groups

IT employers are keen to increase diversity within their workforce, so they hold events, both on campus and off campus, to engage with groups that are underrepresented in their organisation. Some IT employers have held events for students from less advantaged backgrounds, for example.

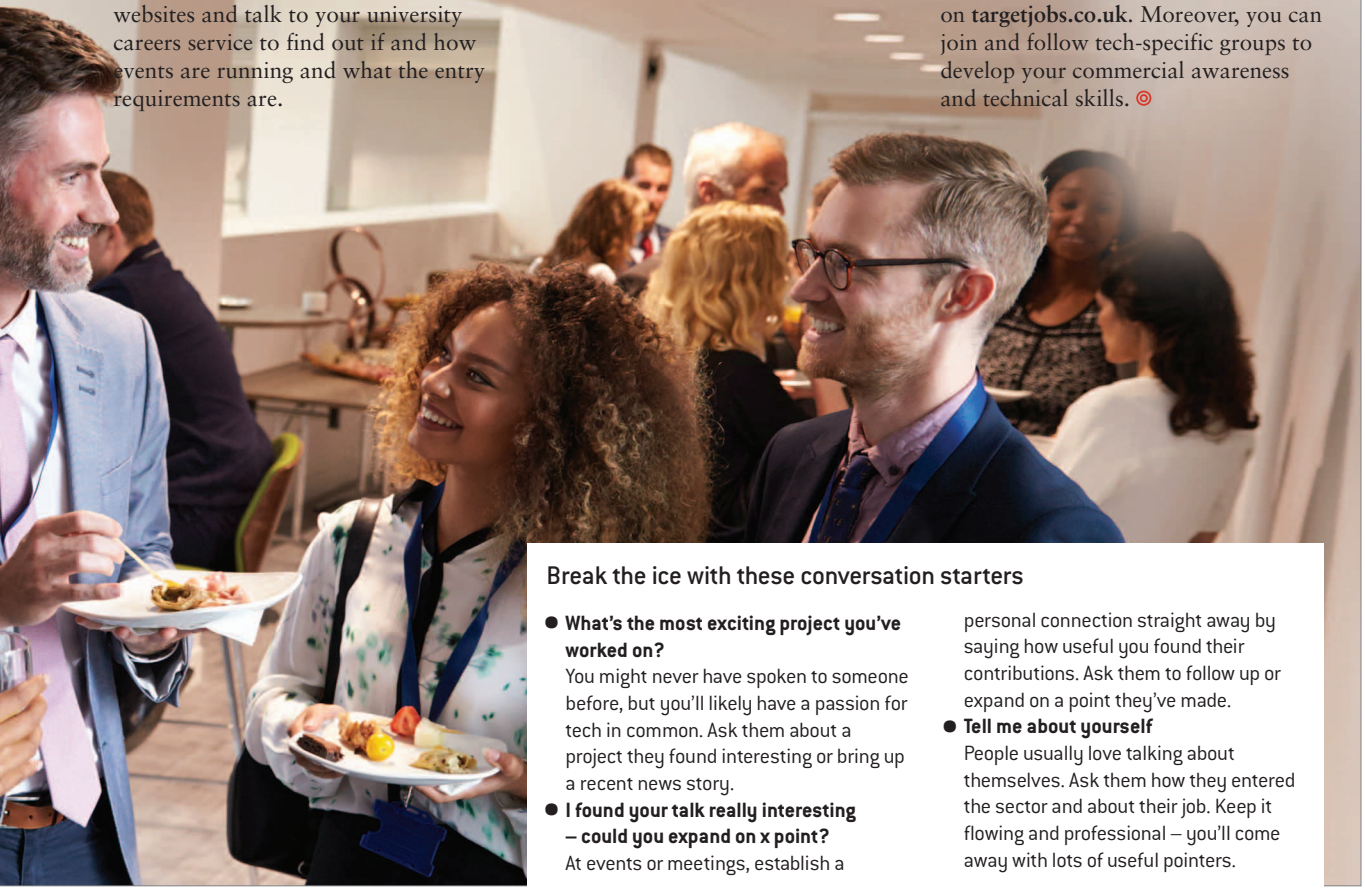
Getting more women into technology roles is something that many IT employers are putting their weight behind. Head to **targetjobs.co.uk/events** to find out more about our *IT's not just for the boys!* event, which will be held virtually in 2020. Employers including Arm, BlackRock, Bloomberg, IBM, J.P. Morgan and KPMG have attended previous events. It's worth utilising these unique opportunities to connect with technology employers, so make sure you find out more.

4 Network on social media

As well as using social media to connect with professionals and recruiters, TARGETjobs *IT & Technology* encourages students to use it as one way of staying abreast of industry trends.

You could, and should, follow your favourite IT employers/recruiters, technologists and technology journalists on Twitter; doing so will help you to stay on top of current employment opportunities (most employers have a recruitment/ marketing team that tweets about spring weeks, internships, industrial placements, graduate jobs etc, as well as their events and talks) and industry trends (recruiters will expect you to know, to an extent, what's going on at the company and in the wider industry).

And then there's LinkedIn. Do you have a LinkedIn profile? If not, think about creating one – it's a useful platform to connect with the people you meet at events (students as well as recruiters), and showcase your skills, experiences and projects. There's advice on setting one up as a student on **targetjobs.co.uk**. Moreover, you can join and follow tech-specific groups to develop your commercial awareness and technical skills.



Break the ice with these conversation starters

- **What's the most exciting project you've worked on?**
  You might never have spoken to someone before, but you'll likely have a passion for tech in common. Ask them about a project they found interesting or bring up a recent news story.
- **I found your talk really interesting – could you expand on x point?**
  At events or meetings, establish a personal connection straight away by saying how useful you found their contributions. Ask them to follow up or expand on a point they've made.
- **Tell me about yourself**
  People usually love talking about themselves. Ask them how they entered the sector and about their job. Keep it flowing and professional – you'll come away with lots of useful pointers.

Extracurricular activities to develop your skills and passion

Developing the skills you need to get a graduate tech job doesn't need to be a chore, and it doesn't need to be through work experience either. Take a look at the following ideas for developing your technical and soft skills in your spare time through extracurricular activities. These opportunities are open to you whatever stage you are at through your degree course or whenever it is in the academic year – although you may find more chances to get involved during the summer or at the beginning of academic terms.

TECHNOLOGY-SPECIFIC OPPORTUNITIES...

Joining a tech community

Where better to learn the skills of a developer than from developers? Tech communities are about meeting other people interested in technology to share knowledge. Examples of tech communities you could join include GitHub (a website for storing your projects and connecting with likeminded individuals), Stack Overflow (a forum for programmers) and hackathons (events where people come together to solve technology problems, often in teams). Many of these groups are actively welcoming to newcomers so don't be shy about joining up and developing your knowledge, brushing up your communication skills and sharing your ideas.

Learning a new programming language

Not only will teaching yourself a programming language expand your technical vocabulary, it'll also show recruiters that you can motivate yourself and are willing to learn. It's a great way to show off your interest in technology too. If you're not sure which languages to learn, have a look at our article on page 20. Once you've learned a language, cement your new skills by finding yourself a project to apply it to.

There are loads of free online resources and tutorials, as well as open-source software that you can download and play about with. If you are coming from a non-technical background and simply want to learn to code, you could use sites such as Coursera and Codecademy to develop your skill. You may want to include the courses you complete on your LinkedIn profile.

Volunteering

Recruiters want to see that you have strong communication skills and that you have a passion for technology. One way of doing both of these is sharing your passion for tech with others, which you can do through volunteering. You can join up with a tech initiative, which is an organisation that exists to benefit people's lives through technology – such as by teaching children to code or helping older people to develop their technical literacy. You could also volunteer by yourself – think of ways you can share your tech knowledge and passion with people in your life.

Entering technology competitions

Innovation and problem solving are fundamental to the technology sector and you can flex these muscles through competitions. These are often sponsored or run by employers and prizes can include internships and placements, trips abroad, cash and even graduate jobs.

OTHER EXTRACURRICULAR ACTIVITIES...

Be a part of sports teams and uni societies...

Taking responsibility for organising events and activities as part of a society or sports teams will build your teamworking and communication skills, which are crucial for any job role.

Try your hand at enterprise

IT recruiters are keen to see graduates who have entrepreneurial skills – the ability to spot an opportunity and make the most of it. It's not just for students who want to start their own businesses. The mindset you'll develop capitalising on opportunities will be applicable when it comes to developing technology solutions, as well as being more directly related in business-focused roles. You may want to consider setting up your own business (which can also show off your tech skills), get involved with student enterprise at university, or start your own university society.

Get involved in presentations and public speaking

Having strong communication and organisation skills can really make you stand out from other aspiring technologists in the recruitment process, and you may not have the opportunity to develop these skills through your degree. Look for opportunities to be involved in presentations, debates or public speaking opportunities and you'll be able to gain experience of organising arguments and grow your confidence in communication.

The Graduate Benchmark

Tests provided by Assessment Day Delivered by TARGETjobs

Test yourself. Compare your score.

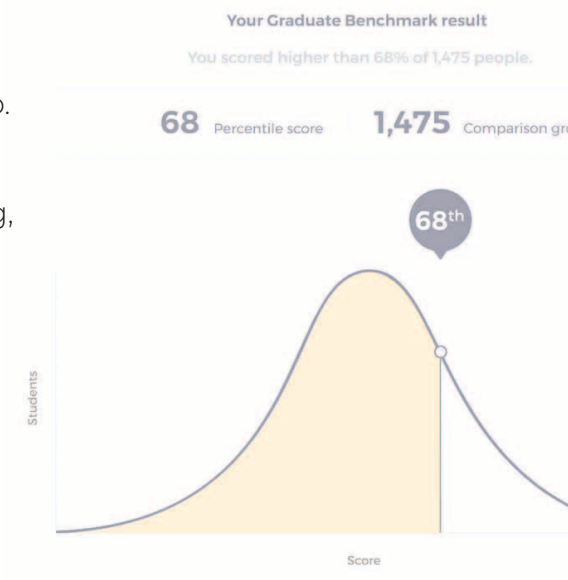
FREE for TARGETjobs members

Do you want to know how well you can do in standard employer aptitude tests? Use the Graduate Benchmark to get an employer's-eye view on how your performance compares to your peers.

1) PREPARE with three practice tests to warm up.

2) TEST YOURSELF on the assessments most used by graduate recruiters: numerical reasoning, verbal reasoning and inductive reasoning.

3) REVIEW YOUR RESULTS in a personalised report and compare your scores to students in your uni, your year, your subject or across the whole country.



Sign in to **targetjobs.co.uk** and go to your dashboard, or search 'Graduate Benchmark'.

Built by gti

Applications & interviews

IN THIS SECTION

Five steps to a stellar covering letter

Many IT employers, from large multi-national corporations to SMEs, request a covering letter along with a CV as part of the online application form. This is an additional opportunity for you to showcase your skills and enthusiasm, as well as highlight specific points that you want to expand on from your CV.

A covering letter (or cover letter, as it's otherwise known) is not always requested, however, so if an employer doesn't ask for one don't include it.

A covering letter shouldn't be longer than one side of A4. How do you sell your experience and skills, and convince the recruiter that you really want the job in three or four paragraphs?

1. Research the employer

Before you start writing your covering letter, spend a good amount of time reading up on the company you're applying to. You should research its business strategy, culture and company values, and familiarise yourself with the list of products and services it provides. You can do this by looking at the employer's website and the employer hubs on **targetjobs.co.uk**. Use our research checklist on page 24 to guide you.

It would also be a good idea to reflect on relevant work experience, presentations you've attended, conversations you've had with employees and recruiters on insight days, or to speak with friends who have done placements there.

2. Be selective

It may be tempting to fill your covering letter with all your technical skills, achievements and examples from university, work and elsewhere. Don't do this – your covering letter complements your CV and should not exceed one page or three to four paragraphs. Be selective about the information you choose to include.

Pinpoint the top three or four attributes that the employer seeks. For example, these could be a genuine interest in technology, practical knowledge of databases and programming, and excellent communication skills. Then focus your covering letter around these requirements.

3. Include examples

Include examples from your academic, work and personal life to prove to recruiters that you have the skills, qualities and experience they're looking for. If they seek a graduate who's interested in pioneering technology, for example, and you attend fairs and conferences to find out what's new in the tech space and blog about it, mention that.

4. Make them feel special

Remember to include the reasons why you have chosen this specific employer – and avoid clichés, such as 'you are a world-leading company'. Your employer research is critical here, as you will be able to make specific points about the company's culture, strategy, or any opportunities for career progression.

For example, perhaps the organisation appeals to you because it constantly works on cutting edge developments and this will enable you to apply and increase your technical skills. Including this will show recruiters that you want to join the company as opposed to just getting a job.

5. Check before you submit

Once you have written your covering letter you should ask a friend, family member or member of staff from your careers service to check it for sense, style and grammatical mistakes. Covering letters with errors leave a bad impression and will cast doubt over your attention to detail and professionalism.

See our example one-page IT covering letter opposite.

Employer hubs

targetjobs.co.uk/employers
Find out more about individual employers.

Example one-page IT covering letter

Luke Riley
129 Lime Street
Liverpool L1 1JN

5 August 2020

Marcus Humphrey
Graduate recruitment manager
Innovation Technology Group
100 Orchid Building
Third Floor
Bristol BS31 4UJ

Dear Mr Humphrey,

Please consider my application for the customer support engineer position at Innovation Technology Group, as advertised on TARGETjobs. My conversations with current graduates at your open days in autumn 2019 have reinforced my interest in the organisation and cemented my belief that I have the technical skills and personal attributes that the group is looking for. I enclose my CV for your consideration.

Through my four-year sandwich degree, which comprised a one-year placement as an IT support technician at ExxonMobil, I have developed a practical understanding of key programming languages and databases, including PHP, Ruby and MySQL, as well as network construction and administration. At ExxonMobil I worked closely with suppliers and a varied client base to overcome operational obstacles, and gained experience solving customer issues and providing first-level analysis. I resolved 88% of the cases I handled on the placement.

I have also demonstrated, outside university and formal placements, that I have a genuine interest in computer programs and cutting-edge technology. I have designed and developed three mobile phone applications, which have been downloaded a combined 1,389 times since they were uploaded to Google Play in February. This also proves that I have the creative and design skills that you seek in a graduate recruit. My stint as a volunteer at Plymouth & District Disabled Fellowship, where I worked in a close-knit team to organise outdoor fundraising events, shows that I can work effectively with others to achieve group-wide objectives.

I am keen to discuss this opportunity and my experience with you in person, and am available for an interview at any time. I look forward to your response.

Yours sincerely,

Luke Riley

Address the recipient by his or her title and surname. If these details aren't stated on the job ad, contact the employer and ask.

State clearly which position you are applying for.

Show that you have made the effort to find out about the company and meet employees.

Mention academic and practical experiences that relate to the role.

Highlight the technical skills the employer seeks.

Include the results of the contributions you made.

Non-academic and non-IT experiences should be included if you've developed relevant transferable skills.

Prove that you're passionate about IT and technology.

Link your skills and experience to the employer's requirements.

State your availability for interview.

You should sign off your letter with 'Yours sincerely' if you have addressed the letter to a named person.

Your covering letter should not exceed one page of A4 or three to four paragraphs.

Stand out with a strong technical CV

Online application forms may have stolen their thunder a bit in recent years, but for many employers (particularly smaller organisations) CVs are still king. Your CV will be how you introduce yourself to many prospective employers, so it needs to catch an IT recruiter's eye, showcase your technical skills, be tailored to the employer you're applying for and show you understand the role you're applying for.

Structure that suits you

Employers notice when a CV is well structured and it's clear that you've put some thought into the process. Your technical CVs should be either one full-page or two full-pages and should follow a clear and logical structure. You need to capture the reviewer's attention with facts and information that show you meet the minimum requirements and have the right skills for the job.

Your graduate technical CV needs to include the following information: personal details; education background and academic details; relevant technologies and skills; information on work experience and projects; and your further interests.

How you structure the above information and what you choose to focus on is up to you. In our example we've gone for quite a simple structure and have used bullet points to organise information. If you do want to use a more elaborate design, make sure that the information is clear and legible. You can see other examples of potential CV formats online at **targetjobs.co.uk**.

To bio or not to bio

We've not included a profile or biography in our example CV. At graduate level, the information you're likely to include in the profile is unlikely to significantly differentiate you from other candidates, so we'd advise skipping the bio and giving the rest of your CV a bit more room.

Let your technical skills shine

Your CV is your opportunity to show off your key technical skills (such as programming languages, platforms, systems, etc.) and so we'd advise giving them pride of place rather than burying them on the second page. Focus on the skills that the employer and the role require: list them first in your skills section and, where appropriate, highlight how you've used them throughout your work experience and projects. Conversely, if a technical skill isn't relevant at all or is outdated, you don't need to include it in your CV.

Indicate your level of ability with each technical skill and include some brief information of how you've applied each skill. Don't shy away from using examples from university, work experience, hackathons or events and personal projects. Recruiters have told TARGETjobs that they really want to see practical examples of candidates' skills, so it's worth considering creating an online portfolio of projects you can link to (just make sure that the content of these sites is suitable for viewing on a company's network!)

It's also worth considering how your CV might look to someone without a technology background. The first person to look at your application might be someone from the HR department after all. Spelling out how you've used technical skills through examples will also help your skills and qualities to be appreciated by a non-technical audience.

Include all relevant qualifications

Not all computer science degrees and technical degrees cover the same content, so it can be helpful to include information about the modules and projects that you have completed. You don't need to list every module you've taken, but pick out a few examples that are relevant to the role you're applying for.

Your qualifications don't have to be from university either; if you've taken the initiative to get some additional computing and technical qualifications, make sure that you include these on your CV. These can be from online courses or classes that you've taken in your free time.

Prove your passion

Recruiters want your CV to show how much you love the tech industry. One way of doing this is through the 'Interests' section on your CV. What you do in your free time can tell recruiters a lot about your motivations, so include details of any hackathons, codejams or relevant groups you've attended. You can find out more about what recruiters mean by 'passion for tech' on page 22.

Highlight your soft skills

While technical aptitude is obviously essential for technical positions, employers place equal importance on your soft skills. Recruiters particularly want to see whether you can:

- communicate well
- work well with others
- complete tasks on time
- adapt and learn quickly
- think commercially
- be innovative.

Don't forget to talk about your soft skills on your CV. Include information on how you used these skills through your work experience, projects and extracurricular activities.

Don't exaggerate

Be ready to talk about the details you mention on your CV during your interview. So, don't overstate your abilities or experience. Expect your application to be reviewed by people with significant technical knowledge, who will quickly be able to spot any inconsistencies or errors.

Finally, before you send off your CV, you should **always** check through the text. Make sure that everything you've written makes sense and that there aren't any spelling and grammar mistakes. It's easy to let glitches slip through. IT employers look for smart, professional people; use your CV and covering letter to demonstrate that you fit the bill.

Example one-page technical CV

Gabi Obiefune • gabi.obie@qmail.com ● 07700 9003712 ● github.com/gabiob ● 45 Blue Avenue, Abingdon OX14 6ST

Technical skills

Programming	**Databases**	**Microsoft Office**
Java, JavaScript, C, C++, C#, Python, PHP	MySQL, SQL Server, Interbase	Windows Server 2019, Linux OS, UNIX utilities, Microsoft Office (Access, Excel, PowerPoint, Word)

Education

- BSc (Hons) computer science with information systems; 1st class degree; Abingdon University (2016–2020)
  Modules included: high-performance computing and distributed systems; database systems implementation; and advanced machine learning.
- A levels: maths (A), physics (A), English (B); Abingdon Sixth Form (2014–2016)

Work experience and projects

Placement developer, Question Technologies, industrial placement (2018–2019)

- Contributed to the development of the March 2019 update for Question Technologies' flagship software, Question Answerer 4, primarily coding using **C** and **C#**.
- Responsible for implementing improvements to the user interface and conducted in-depth research into methods to increase the software's accessibility functionality.
- Demonstrated strong **teamworking skills** with colleagues in the development team, which was necessary for discussing requirements and solutions to complex problems.
- Communicated with, and offered technical support to, a wide and varied client base.

FindMyGlasses, Android application (2020) github.com/gabiob/glasses

- Working in a team of two at a hackathon, developed an application for Android OS in 36 hours. This app used GPS tracking to find a user's glasses. This was written in **Java**.
- This demo was later fleshed out and released on the Play Store in April 2020. Downloaded 1,467 times since release.

Volunteer, Tech4Kids (2016)

Assisted in teaching the basics of coding to students at St Benjamin's School, Didcot.

Interests

Grade 8 Oboe. Performed as part of the University Woodwind Band. Served as treasurer from 2017–2018.

Seven golden rules for online application success

Instead of just submitting a 'traditional' CV and covering letter, many employers will opt to ask you to fill out a bespoke online form as the first step in the application process.

Before beginning an online application, consider what graduate employers want to see. Recruiters are looking at the overall quality of the application: so they're not just seeing whether you match the job requirements, but whether your application is written in a clear, concise way. If writing isn't your strongest point, ask someone you trust for help. You don't want to give the impression you're careless or won't be able to communicate with clients and customers.

1 Put in the time

Online applications take time and preparation, so don't try to rattle them off in breaks between lectures. Schedule in some blocks of undisturbed time to conduct research, work on your responses and submit your form.

Before you start, make sure you understand the job or graduate scheme you are applying for and what the organisation does. Turn to page 24 for more on the research you should do before applying. Check your skills and qualifications match the requirements for the position or the graduate programme. Most graduate IT employers will also have specific core competencies they seek. These typically include communication skills (written and verbal), organisation and planning skills, teamworking ability, etc. See the articles on technical skills and soft skills on pages 20 and 18 respectively and the employer hubs at **targetjobs.co.uk/employers** for more details.

If possible, print off the application form so you can read it properly without the temptation to start typing. Prepare your long answers in a word-processing document so that you can more easily review and spell check your responses.

2 Tailor each application to the employer

A seemingly simple question might be 'What attracts you to applying for a graduate position within IBM?' or 'Why do you want to work at CGI?'. The company does *not* want you to parrot back statistics and facts from its website about how great it is. Instead, it wants you to show that you understand its business and the graduate job you are applying for, and link these to your own interests or experiences. For example, you might want to highlight a technology that is particularly important to the organisation and outline how you are enjoying using it in your final-year project or explain how your work experience has helped you confirm that you want to work in the company's particular area of business.

3 Never cut and paste

The questions may seem similar from form to form but there can be subtle differences, so avoid cutting and pasting in responses from other applications. It may seem easier, but it also makes it easier to miss the point of the question, or leave in another employer's name. Moreover, each employer has different expectations and may place greater or lesser importance on different aspects of a competency or skill. Look at the questions carefully and make sure you understand exactly what they mean.

4 Include a variety of examples

What you've done in the past is usually a good indicator of how you will perform in the workplace, so use real-life examples and experiences when responding to competency-based questions that ask you to discuss when you used a particular skill, rather than making general statements about yourself (eg 'I am highly organised'). The examples you use don't have to come just from your academic experiences. Work experience, IT-related or not, is always a good source to draw upon. Even the most routine summer job can show an employer how you react under pressure, deal with people and solve problems. Internships or part-time jobs can be particularly useful when you are asked to provide an example of a time when you demonstrated strong commercial awareness.

You can also demonstrate your competencies through your hobbies, family situations you've dealt with or other personal experiences. For example, you might want to draw on an inspiring personal project to help answer the question 'Tell us about a time when you showed drive and enthusiasm'. Use a different example for each question – recruiters like variety.

5 Make your responses structured and concise

Applications often have a word limit for longer responses to questions on competencies and skills. Keep them relevant and concise. Use the STAR acronym to help you structure your response to this type of question. Write a brief description of the **S**ituation and **T**ask, devote more space to describing the **A**ctions you took, and then briefly sum up the **R**esult of your actions and any lessons you learned from the experience. Many applicants devote too much space to explaining the situation. It is better to use the space to explain the personal actions you took and what you learned from the experience.

Make doubly sure your responses are about what *you* did. If you use a group project or team-related example, don't talk about 'we', 'us' or 'they'.

6 Pay close attention to detail

Accuracy is really important in the life of a tech professional. If you were an IT employer, would you trust someone who didn't have good attention to detail to code your flagship software application or document requirements for a business-critical system? It is important that candidates take the necessary care to ensure there are no spelling or grammatical mistakes.

You will also regularly use your writing skills in the IT business, so a well-written application is a good indicator of your ability to present a clear message. When you work online, it's easy to slip into being informal and a bit too casual.

On an application form you can show your accuracy by:

- always writing full, grammatically correct sentences, using a capital letter for 'I'
- including all the information requested, leaving no blanks
- checking that you have expressed yourself clearly and that your sentences make sense
- checking your spelling carefully.

7 Do final checks

Before you click submit:

- go away and take a break. When you return, check through the responses again
- get someone whose opinion you trust to read through your responses
- paste your responses into the form and print out the completed copy
- proofread it and, assuming everything's perfect, keep a copy – you'll need to refer to it if you get invited to interview.

Get up to speed with technical interviews

Employers may have changed their recruitment processes (especially the final stages) due to the coronavirus. You might be invited to a virtual interview or assessment centre instead of in person, for example. You should check with individual employers to see what they're doing.

It is common, though, for IT candidates to face a technical interview so employers can take a closer look at your technical abilities. The aim isn't *just* to see how much knowledge you have amassed in a particular area. It's also about your potential to be a technology leader in the future.

What can you expect?

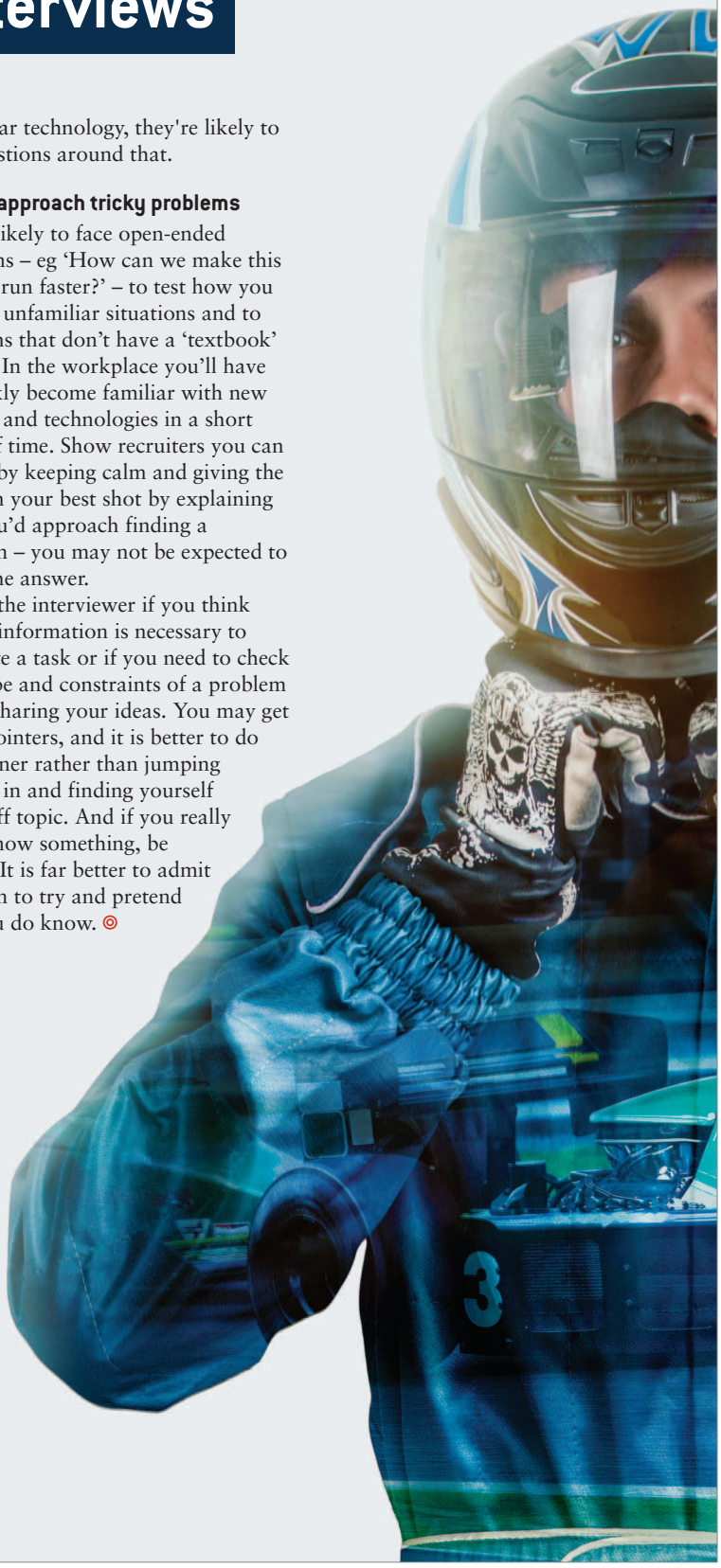
You could be assessed through practical tests, design exercises, presentations or technical quotations – or a combination of all four. These assessments can happen throughout the application process; you might be asked to complete a practical test in an online application or a presentation during an assessment centre. For example, recruiters may ask you to comment on a range of scenarios or hypothetical situations of increasing complexity – or give you brain teasers – in order to assess your problem-solving skills. Another common technical interview practice is to get candidates to work on a short design exercise or code analysis activity before the main interview begins. Be prepared to present your solution and explain your findings to your interviewers, and expect them to ask how, given more time, you might revise the system or code and why.

Keep in mind that interviewers are unlikely to ask you to demonstrate skills that you don't have. They will use your CV as a guide to your knowledge level so they can ask you the right kind of questions, whether you're a beginner or expert. There's one more reason not to exaggerate your abilities on your CV! If you've stated that you have experience with a particular technology, they're likely to ask questions around that.

How to approach tricky problems

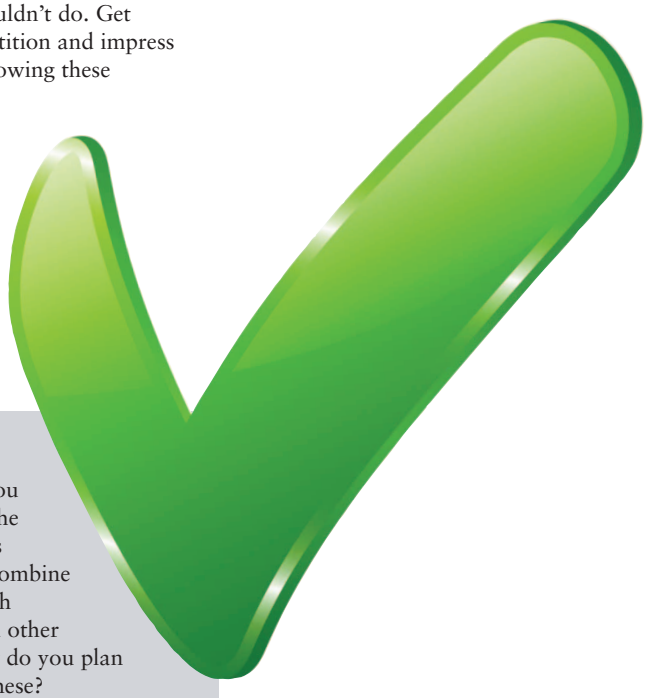
You're likely to face open-ended questions – eg 'How can we make this process run faster?' – to test how you react to unfamiliar situations and to problems that don't have a 'textbook' answer. In the workplace you'll have to quickly become familiar with new systems and technologies in a short space of time. Show recruiters you can do this by keeping calm and giving the problem your best shot by explaining how you'd approach finding a situation – you may not be expected to know the answer.

Ask the interviewer if you think further information is necessary to complete a task or if you need to check the scope and constraints of a problem before sharing your ideas. You may get a few pointers, and it is better to do this sooner rather than jumping straight in and finding yourself going off topic. And if you really don't know something, be honest. It is far better to admit this than to try and pretend that you do know.



Dos and don'ts for tech interview success

A graduate interview shouldn't just be a Q&A session – it should be a conversation between you and the recruiters. And, like any conversation, there are some things that you should do and some things that you shouldn't do. Get ahead of the competition and impress interviewers by following these simple rules.



Do...

... ask your own questions

An interview is your opportunity to decide whether you want the job, as well as the recruiters' chance to decide whether to offer it to you. What's more, interviewers want to be confident that you understand the position and know about the employer. Take all opportunities to ask questions about the role, as long as you can frame them in a positive way. Good topics include the precise nature of the role, training and development, what previous recruits have progressed on to do and your interviewers' own backgrounds (if they work in the sort of career you're trying to get into).

... treat your interviewers as human

Seeing your interviewers as normal people will make you feel better and could help you get ahead. A little 'polite-but-genuine' small talk at the beginning or end of the interview will help you stand out as a mature, thoughtful candidate who knows how to interact with others in a business context.

... highlight your wider skills set

As a technology or computing graduate your technical skills are clearly there on the page for your interviewer to see, but what else can you bring to the role? The 'dream candidate' is someone who can combine technical ability with communication and other personal skills; how do you plan on demonstrating these?

... be honest

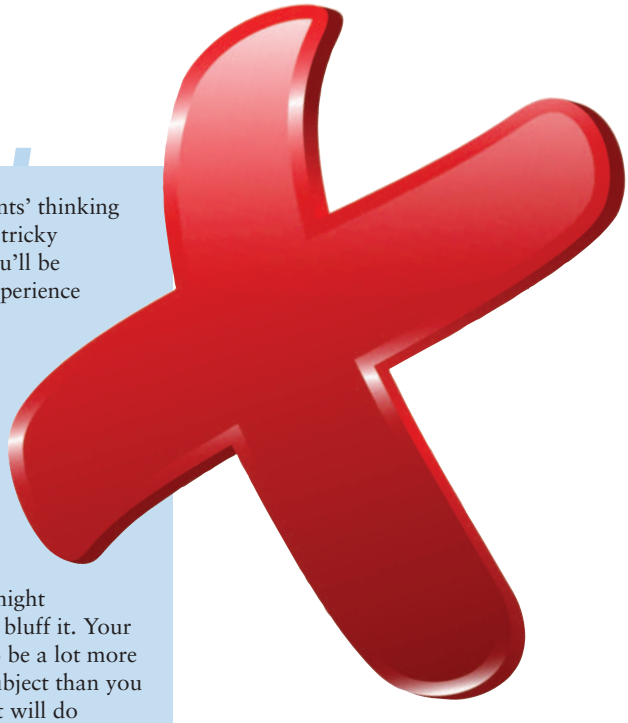
That said, your interviewer is not expecting the finished article, so there's no shame in revealing you lack experience or competencies in a particular area. The main thing is to show willingness to work on any areas of weakness and, ideally, evidence that you're taking steps to do this, perhaps by taking part in extracurricular activities.

... show enthusiasm

You shouldn't expect your technical skills and qualifications to speak for themselves. Employers want to see motivated candidates who can clearly express why they want the job. You might be the brightest person in the room, but it counts for little if you don't come across as enthusiastic and motivated.

Search: TARGETjobs IT

Don't...



... be passive

Almost all recruiters have a set interview format that they need to stick to, asking particular questions in a specific order. Attempting to 'hijack' the interview and disrupt this will do you no favours; however, this doesn't mean you have to be passive, or that recruiters want you to be. Work within the framework they provide to sell your skills and experience as well as possible.

Before your interview, identify what relevant experience and attributes you possess and make sure you communicate all these at some point in the interview. If you're not asked about them directly, you may be able to include them in your responses to other questions, for example if asked to provide an example of a time that you've worked in a team or led a group. Towards the end of the interview, you may well be asked if there's anything you'd like to add – take advantage of this to mention any key points you haven't yet had a chance to cover.

Be aware that your interviewers may not be the same people who screened your application, particularly in large organisations or if they are not part of the HR or recruitment team. They may have had little or no chance to read your application beforehand, so don't assume that they'll know about your achievements if you don't mention them.

... be a know-it-all

Recruiters respect candidates who acknowledge gaps in their experience and knowledge, and deal with difficult questions in a positive way. If you need clarification about what you're being asked it's fine to say so, and it's OK to take a few moments' thinking time before answering a tricky question. It's possible you'll be asked about a skill or experience you just don't think you possess yet – acknowledging this and indicating a willingness to learn is a safer bet than lying. Likewise, if you don't know the answer to a question it's wiser to admit this (perhaps outlining the steps you might take to find out) than to bluff it. Your interviewers are likely to be a lot more knowledgeable on the subject than you are and being caught out will do nothing for your job prospects.

... assume all technology roles are the same

You might have your heart set on a particular role or function, but top IT graduates have the flexibility to work in a range of different jobs, from programming and development to project management and analytics. Bear in mind that your employer may be evaluating your fit for a number of potential positions or rotations, even if you aren't.

... ignore the bigger picture

By the same token, where IT candidates sometimes fall down is not being able to look beyond their own area of expertise or interest, particularly when applying to a non-tech company. It's important to demonstrate your interest in, and understanding of, the organisation's wider business, whether that's banking, professional services or consumer goods.

For more interview advice...

... go to the interview advice section on **targetjobs.co.uk**. We cover Zoom and video interviews, what to wear, how to deal with nerves, body language tips, tricky interview questions and more.

How you should answer 'Why do you want to work for us?'

This question may look short, simple and not something to waste too much valuable time on, but don't be fooled: when you're asked 'why do you want to work for us?', 'What attracts you to this position?' or 'Why do you want this job?', you're *actually* being asked:

- What do you know about the company and the position?
- What evidence can you provide that you have an interest in the sort of thing we do?
- What do you hope to get out of the job, apart from a salary?

That's not all – you'll also have to answer a number of 'unspoken questions' that recruiters will have in their minds while they are considering your answer:

- Are you serious enough about the job to have bothered researching us properly?
- Do you have a realistic understanding of what the job actually involves?
- Do you want the job?
- If you accepted the job, how long would you stick around for?

Why do recruiters ask this question?

Put yourself in your interviewers' shoes for a second: recruiting and training graduates is a very expensive and time-consuming business, so it's understandable that they want to be convinced that the graduates they hire will be genuinely motivated to do the job and won't leave after a few months or a year. Recruiters have told TARGETjobs that they're not just looking for good current graduates, but good *future* employees.

You need to prove that you understand what the job you're applying for is and how it fits in with your interests and long-term career goals. Your answer needs to convince employers that your decision to apply has been carefully considered and is genuine.

What makes a BAD answer

Skimp on your research and you'll end up resorting to empty waffle to fill up time in an interview or space on your application form. Generic, or unquantifiable statements, like 'I've always wanted a career as a software developer in a health informatics firm' won't hold water as answers – you need to have strong evidence to back up your answers. Blatant flattery will go down badly: saying 'I'd relish the opportunity to work for such a prestigious organisation...' just screams 'I don't know the first thing about you.' Similarly, saying 'I feel my unique blend of skills, experience and academic achievement makes me the perfect match for the job' without actually stating what these are makes you anything but unique. Recruiters see enough cliché-ridden applications every day as it is. Ensure yours isn't one of them.

Answers that are too brief to be substantive won't impress either. This is especially a danger in online applications – a one-line answer to the question 'Why do you want to work for us?' suggests to technology recruiters that your real answer is 'Actually, I don't.' Even worse, leaving in the wrong company's name, having copied and pasted the answer from an earlier application, screams out both 'I said the same thing to your competitors' and 'I'm really slapdash.' This might sound like an impossibly obvious mistake, but recruiters have told us that this is very common.

What makes a GOOD answer

So, now we know what not to say, we can work out what you should be saying. Your answer to 'why do you want to work for us?' therefore needs to include:

- evidence that you understand the employer's business
- evidence of interests or experience that relate to this
- clarification of your career goal and, if necessary, how this job will help you towards this.

Be honest and say what you think. What genuinely made you click 'Apply'? Telling an employer what you think they want to hear doesn't work and recruiters are very good at seeing straight through it. This is where research comes in, as you'll be able to talk about the sorts of projects they work on or the new technologies they're using and why that interests you. Make sure your research goes beyond what's easily available on the employer's website. Use sources such as work experience, networking events and social media to go beyond the basics. You can find out more about what you need to research on page 24.

A particularly strong answer will link your research into the employer and your knowledge of its work, aims and culture to your own experiences. The more details the better: make sure to name relevant internships, projects, university modules or active involvement in relevant societies, and go into specific detail about how this has informed your decision to apply. Finally, put your answer in the context of your own career goals and explain how the organisation and the role will realistically help you to achieve these.

For online application tips
Take a look at pages 38–39.

What to expect at assessment days

Assessment centres have become a regular feature of the graduate recruitment process, with many large employers using them as the final stage for candidates. However, you should check with individual employers regarding their plans this year. They may well have changed the process, or moved to a virtual assessment centre, due to coronavirus. You can find more advice for virtual assessment centres at **targetjobs.co.uk**.

Graduate employers use assessment centres to bring together a group of candidates and test for the skills and aptitudes that are right for their own organisations. As well as interviews, expect to do a combination of group work exercises, presentations, aptitude and psychometric tests, or case studies linked to the job function. Ensure you showcase your commercial awareness, for example by considering the business context of a case study task and the commercial implications of your proposed solution. Employers will also give you the opportunity to find out more about them and to talk to current employees.

Group tasks

Group exercises are used to check out your communication and problem-solving skills, and to ensure that you can work effectively in a team. They include discussion groups, exercises that involve role-playing to a specific brief and, most commonly, working through a job-related scenario or case study.

You need to support the group in completing the task that has been set while also promoting yourself. The best way to do this is to show yourself to be a good team player – flexible, full of ideas but willing to listen to and help expand the ideas of others.

Presentations

At some assessment centres you will be asked to give a presentation, usually to a mixed group of candidates and assessors. Here are a few ground rules:

- If you have a free choice of topic, choose something that you can talk about naturally and easily – don't choose a topic just because you think it will impress.
- A structure is helpful to prevent your mind from going blank and will help the audience keep track too.
- Use whatever form of notes you feel comfortable with.
- Don't attempt to fit in too much information or your audience will switch off. Five minutes is only enough time to present three big ideas or messages.
- Much of the message of your talk will be transmitted non-verbally, so your body language can make a huge difference to your presentation.
- You may be invited to use a flipchart or slides – use these to your advantage to support your presentation but don't just read off the screen or spend too long on them.
- Fit in time for a practice run before the real thing.

Psychometric tests

Many graduate employers use psychometric tests during recruitment as they give some quantifiable measurement of whether or not you possess certain aptitudes and abilities essential for the job. You may already have taken psychometric tests as part of the application process, but recruiters may do a double check.

Ability tests assess general intelligence and skills that someone with your level of education should possess. These are most likely to be numerical or verbal reasoning tests specific to the job you have applied for. Expect to use complex information, including numbers and diagrams, to solve problems using logical or lateral thinking.

Aptitude tests assess your ability to learn something new. Employees are increasingly expected to be flexible and adaptable in the workplace, so those who show ability to develop new skills quickly are in high demand. If you are from a non-technical degree background and have applied to work in a technical role, you may sit a programming aptitude test.

Personality tests assess your typical behaviour and preferred way of going about things, especially when presented with difficult situations. There are no right or wrong answers: honesty is the best policy.

New assessments

Some employers have introduced technology assessment centre exercises that use virtual reality. Recruiters have previously reassured TARGETjobs that applicants won't need to have any previous experience with VR, as these exercises are used to look for the same skills and qualities as the rest of the assessment centre. Don't pay too much mind to the technology; instead focus on showing off your skills and your suitability for the role. However, if there any extenuating circumstances that mean you cannot take part in these exercises, make sure you let the recruiters know in advance.

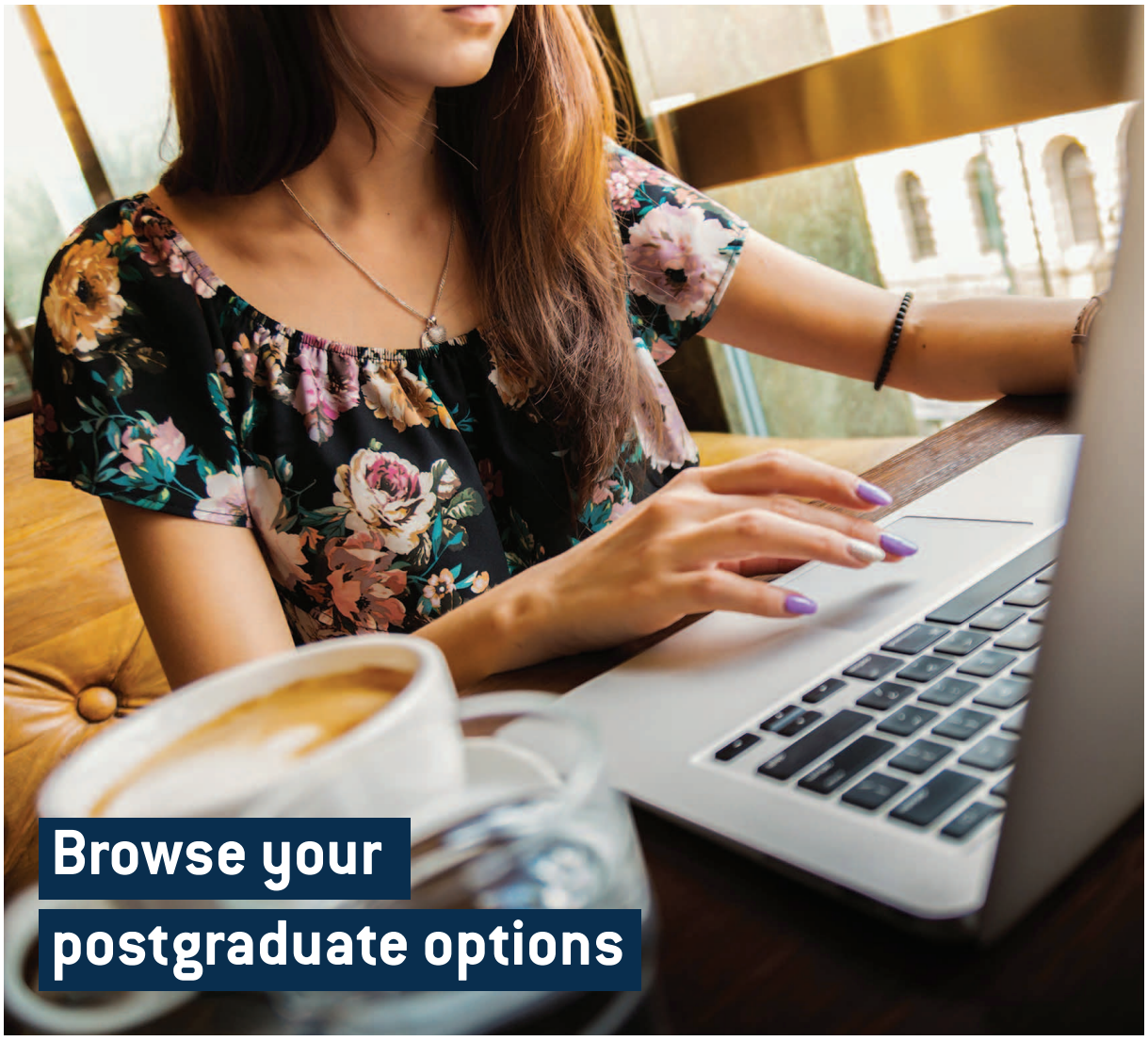
> 'Be a good team player – flexible, full of ideas but willing to listen to and help expand the ideas of others.'

Be professional

Always remember that you are being assessed against the employer's criteria and not against the other candidates. You need to find a way to work together with your 'colleagues' to achieve the goals and tasks set. Turn up with an open mind and be ready to get involved. ◎

Further study

IN THIS SECTION



Browse your postgraduate options

Finding the right course or studentship requires thought and planning. You need to understand the different options, and also consider the long term, so that further study provides a springboard into employment. Think about your career options at the same time as considering postgraduate study and research the employers you might want to work for later on: some will value the right postgraduate degree, so you may increase your job chances or starting salary. However, others do not need postgraduate expertise, so will not place masters or PhD holders above other applicants or pay them extra.

Masters or doctorate?

There are two main postgraduate study options for graduates from technical first degrees.

Masters degrees can be either a one-year taught course resulting in an MSc, or a research-based degree called an MRes (some research-based courses will result in an MPhil). Graduates typically choose masters courses to specialise further in a particular area of technology, for example software engineering, data analytics, cyber security, networking and machine learning. You'll find a wide range of different course options by looking at universities' online postgraduate prospectuses.

A doctorate (PhD or DPhil) is a research-based qualification. It's a full-time job and requires the same level of forethought and preparation as finding a graduate job. You will usually need a good first degree (typically a 2.1 minimum), a masters degree and to feel confident of your interest in a particular research subject as you will be focusing on it for three to four years.

You can also do an integrated PhD. This is a four-year programme that combines research with training in discipline-specific and professional skills. You may not need a masters degree before doing an integrated PhD.

Identifying relevant courses

Ideally, you should begin thinking about postgraduate study at least a year in advance of when you want to start as that's when academic departments usually promote their courses. Keep an eye out for postgraduate fairs to attend.

If you already know what subject you want to pursue, read up on it thoroughly and track down the courses and academic research groups that are actively working in the area. Do a literature search to find recently published papers in key journals – your university library should be able to help, or try Google Scholar (**scholar.google.co.uk**) for an initial search. Get further help and compare postgraduate course providers at **targetjobs.co.uk/postgrad**.

Analysing course quality

Once you have a number of potential courses, you can compare the courses or programmes on their relative merits: course content, modes of study and university facilities. Also do some basic checks on the department so you know its research strengths.

Take every opportunity to talk to current postgraduate students and researchers, for example during interviews or open days. They can give you a realistic view of life in academia and they will be able to tell you how their group functions practically. You can also ask what previous students have typically gone on to do.

A good number of postgraduates stay at their current university. This can be positive – you will be familiar with the department, its specialist fields, teaching staff and potential supervisors. However, don't choose it as a safe option: it needs to offer the course/research opportunities that are right for you. Keep in mind that moving to a new university could broaden your horizons and expand your network of contacts.

Keeping connected to the commercial world

Whether you do a masters or a PhD, make sure you stay up to date on what's going on in the commercial technology sector. While you study, find ways to develop general competencies that will give you an advantage in the workplace. Read more on pages 18–19.

There is an increased focus on providing professional skills training for postgraduates. Vitae (**www.vitae.ac.uk**) is a national organisation that facilitates such activities for UK researchers. It works in partnership with the UK's research councils to provide advice, resources, skills development programmes and networking opportunities, but schemes like this aren't the only way to develop your skills portfolio.

Take an active part in group discussions and seminars, and use undergraduate teaching opportunities and conference poster sessions to develop good communication and presentation skills. You can also make the most of university facilities to add some additional strings to your bow. For example, learn an additional programming language (see pages 20–21) to show your versatility and adaptability, and make sure you're competent in the basics of regular office software packages.

Selling your expertise to recruiters

Many IT employers value postgraduates for the qualities they bring to the workplace in addition to their specialist knowledge, but a PhD or MSc won't guarantee you a job. You'll still need to work hard on matching your key attributes to what recruiters want.

The benefits you'll be able to sell include your inquiring mind and the self-motivation that comes from defining and setting your own goals and from managing an extended project. Extra confidence and maturity can also be big assets. While your intellectual achievement will never fail to impress, you must be able to convince recruiters that your postgraduate skills are transferable to their environment.

Funding providers

- The Engineering and Physical Sciences Research Council (EPSRC) is the main funder of technical and science-related postgraduate research in the UK. Visit **epsrc.ukri.org** to find out more.
- Studentships and awards typically cover your course fees and pay your maintenance (stipend).
- EPSRC studentships and awards are allocated to university departments and research groups and not directly to postgraduate students. You need to apply directly to the department or research group for your research programme or course, and they then decide which successful applicants are put forward for funding awards.
- Commercial sponsorship may also be available for certain research projects. As well as boosting your EPSRC funding, these opportunities give you the chance to gain some commercial experience working alongside the sponsor organisation.

'A PhD or MSc won't guarantee you a job afterwards. You'll still need to work hard matching your key attributes to what recruiters want. The benefits you'll be able to sell include your inquiring mind, self-motivation, extra confidence and maturity.'

Find more tips
on targetjobs.co.uk/postgrad

Upgrade your degree with an IT conversion course

Conversion courses can help graduates without IT degrees integrate into the industry and increase their chances of securing jobs – particularly technical roles. They provide a grounding in the basics of IT and computing and are typically a year-long, taught masters course.

For many graduates the IT conversion course is the path to a completely new career, but it could also boost professional opportunities in areas related to your undergraduate degree. For example, if you are a biology graduate, extra computing skills could help you specialise in the growing field of bioinformatics, or healthcare technology. An economics graduate could gain the technology skills needed to get into financial modelling. But, as the business world becomes ever more reliant on technology, it's no bad thing for any graduate to have a good understanding of computers and IT systems.

Think about your career goals

To get the most out of a postgraduate conversion course you need to give some thought to what you want to do at the end of it. Conversion courses are intense. You'll be brought up to speed in a completely new discipline in a relatively short time, so you need to be motivated.

> 'Technologists need to possess strong people skills and business acumen. Conversion graduates frequently display these traits.'

Researching the IT business sector and listing the main employers that interest you is a good way to start – you need to make sure that you really do want to work in the IT sector before you pay thousands or take out a loan to join it! Take a close look at the different roles offered by IT employers and identify which ones interest you (page 56 onwards can help). This will give you an idea of the skills and competencies you will need and it will help you compare the course content so that you find the masters that suits your career aims.

Find the best course for you

Pay attention to the fees, content and modules of different IT courses. An MSc in computer science or computing will typically cover core computing principles and be heavier on programming, development and networks, compared with an MSc in information technology. The latter could focus more on building IT applications within business and society. Both types provide invaluable skills but one may be better suited to your career intentions than the other. Look at the content and key modules carefully – while you'll want to be challenged by your postgraduate studies, why struggle with loads of programming if that's not your long-term IT interest?

Where to find funding

- If you have already found a masters course that interests you, check what financial help may be available through the university or department, eg scholarships or bursaries. Make enquiries before or when you apply.
- You may be eligible for a postgraduate loan of up to £11,222 from the government. Find out more about repayment terms and eligibility at **gov.uk/funding-for-postgraduate-study**
- Visit your university's careers service to find directories of funding organisations and more information on postgraduate study.
- Start planning your postgraduate study as soon as possible to increase your chances of finding and securing funding.

To maximise the benefits of converting to IT you also need to choose the right place to study. Different institutions will have different emphases and provide a variety of learning environments, so you will need to decide what suits you best.

Look out for department open days, and talk to students and staff – this is a good way to assess a course's quality. If you are taking a conversion course to boost your employability, make sure you find out what previous students have gone on to do and in what IT areas they have typically found work.

Getting onto a course

Check the minimum requirements carefully. You need to make sure that your undergraduate degree will allow you entry onto the course and that your degree classification meets the minimum requirements. Many courses accept graduates from all disciplines, but may ask for a minimum of a 2.2 or a 2.1. You may also need to have evidence of numerical ability (such as an A level in mathematics), and courses with a deeper technical element may only accept graduates from numerate, technical or science degrees.

If you have any prior experience in computing or IT-related work experience, mention this in your application along with the strength of your mathematical and analytical skills. This will help admissions tutors assess your suitability for the course.

The combination of the technology skills gained through a conversion masters and the general competencies developed through your first degree will give you a breadth of experience and a strong skills set. Technologists need to possess strong people skills and business acumen, and understand the diverse needs of IT users, as well as having deep technical knowledge. Conversion graduates frequently display these highly sought-after traits.

Gain extra employer appeal by seeking out a course that will expose you to IT and computing in a commercial context through a placement or project work with an employer. At the very least, keep up to date with the latest technology developments and goings-on in the industry, and link what you are learning to what's going on in the commercial world of information technology.

Roles & sectors

IN THIS SECTION

Key:
A guide to the proportion of technology/business skills used in the role:

- technology
- business

Decoding job title jargon

Find out what these common job roles involve.

The assortment of roles and variety of job titles used in the IT industry can make things tricky when trying to decide whether or not a particular job is right for you. Chances are you've got enough on your plate already, so we've decoded some of the more common job titles you may come across during your search.

Pay close attention to the job description of any position you apply for. In particular, take note of the key skills and competencies wanted. You should also ask questions at interviews to find out more specific information about what the role will involve day to day. This will ensure that you find the right job with an employer you'll be comfortable with.

Network engineer

0 ●●●●●●●●●● 10

ALSO KNOWN AS: hardware engineer, network designer.

THIS JOB IN BRIEF: Network engineering is one of the more technically demanding IT jobs. Broadly speaking, the role involves setting up, administering, maintaining and upgrading communication systems, local area networks and wide area networks for an organisation. Network engineers are also responsible for security, data storage and disaster recovery strategies. It is a highly technical role and you'll gather a hoard of specialist technical certifications as you progress. A telecoms or computer science-related degree is needed.

Key skills include:

specialist network knowledge | communication | planning | analysis and problem solving

Systems analyst

0 ●●●●●●●●●● 10

ALSO KNOWN AS: systems developer, systems engineer.

THIS JOB IN BRIEF: Systems analysts examine existing IT systems and write requirements for new ones. They analyse how well software, hardware and the wider IT system fit the business needs of their employer or of a client and write requirements for new systems. They may also help implement them, train users and monitor their effectiveness. Travel is a key feature of the job as the majority of work is undertaken at clients' premises. To get a job as a systems analyst you usually need a degree in a technical or IT subject.

Key skills include:

ability to extract information | analysis | communication | persuasion and sensitivity

Business analyst

0 ●●●●●●●●●● 10

ALSO KNOWN AS: business architect, information specialist.

THIS JOB IN BRIEF: Business analysts are equally happy talking with technology people, business managers and end users. They identify opportunities for improvement to processes and business operations using information technology. The role is often project based and begins with analysing a customer's needs, gathering and documenting requirements and creating a project plan to design the resulting technology solution. Business analysts need technology understanding, but don't necessarily need a technical degree.

Key skills include:

communication | presentation | facilitation | project management | problem solving

IT support analyst

0 ●●●●●●●●●● 10

ALSO KNOWN AS: helpdesk support analyst, technical support analyst.

THIS JOB IN BRIEF: IT support analysts provide technical set-up, support and advice to IT users via email, phone, social media and in person. They either provide support within a particular organisation, to external businesses, customers of a particular product, or on an ad hoc basis. For example, there is a growing market for on-demand services for home and office tech repair, set-up and troubleshooting. While open to graduates of any discipline, technical support employers typically prefer graduates with an IT-related degree.

Key skills include:

wide-ranging tech knowledge | problem solving | communication | listening | patience

Job descriptions: See more job descriptions at targetjobs.co.uk/it

Software developer

0 10

ALSO KNOWN AS: software engineer, software architect, web developer, mobile developer, systems developer, test automation developer, video game developer.

THIS JOB IN BRIEF: Software developers implement software solutions by building programs, applications and websites. They write and test code, often using development tools. The work can involve talking to clients and colleagues to assess and define what solution or system is needed, which means there is a lot of interaction as well as full-on technical work. A computing, software engineering or related degree is often needed but a few employers train up other graduates who can demonstrate a genuine interest in, and aptitude for, software development.

Key skills include:

analysis | logical thinking | teamwork | attention to detail

Project manager

0 10

ALSO KNOWN AS: product planner, project leader, master scheduler.

THIS JOB IN BRIEF: Project managers organise people, time and resources to make sure information technology projects meet stated requirements and are completed on time and on budget. They may manage a whole project from start to finish or manage part of a larger 'programme'. It isn't typically an entry-level role: project managers have to be pretty clued up. This requires experience and a good foundation of technology and soft skills, which are essential for working with tech development teams and higher-level business managers.

Key skills include:

organisation | problem solving | communication | clear thinking | ability to stay calm under pressure

Technical sales representative

0 10

ALSO KNOWN AS: account manager, sales executive.

THIS JOB IN BRIEF: Technical sales may be one of the least hands-on technical roles, but it still requires an understanding of how IT is used in business. You may sell hardware, or extol the business benefits of whole systems or services. Day to day, the job could involve phone calls, meetings, conferences and drafting proposals. There will be targets to meet and commission when you reach them. A technology degree isn't necessarily essential, but you will need to have a thorough technical understanding of the products you sell.

Key skills include:

product knowledge | persuasion | interpersonal skills | drive | mobility | business awareness

IT consultant

0 10

ALSO KNOWN AS: technical consultant.

THIS JOB IN BRIEF: The term 'consultant' can be a tagline for many IT jobs, but typically technical consultants provide technical expertise to, and develop and implement IT systems for, external clients. They can be involved at any or all stages of the project life cycle: pitching for a contract; refining a specification with the client team; designing the system; managing part or all of the project; after-sales support... or even developing the code. A technical degree is preferred, but not always necessary.

Key skills include:

communication | presentation | technical and business understanding | project management | teamwork

Web designer

0 10

ALSO KNOWN AS: multimedia programmer, UX designer, web developer.

THIS JOB IN BRIEF: Web designers create the design and layout of a website or web pages, working with colleagues or clients to meet their requirements. Their role is different to web developers, who specialise in making web designs a reality; however, there can be crossover between the two roles. Employers are likely to seek a degree in digital media design or a related subject but, whether you have a related degree or not, you will need to be able to present a portfolio of your best web design work.

Key skills include:

communication | creativity | attention to detail | problem solving

QA analyst

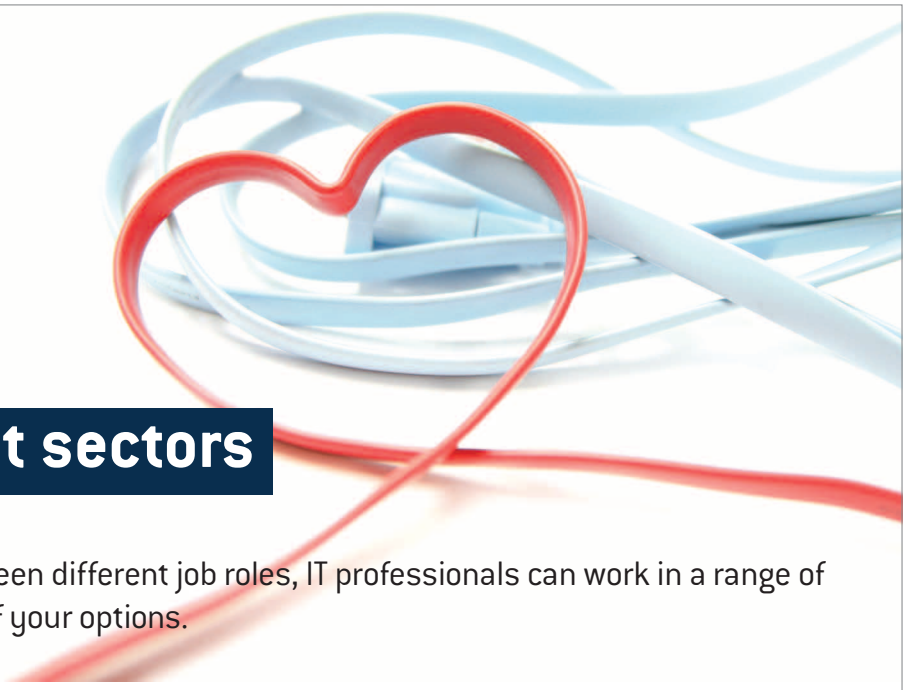
0 10

ALSO KNOWN AS: test analyst, software tester.

THIS JOB IN BRIEF: QA (quality assurance) analysts test programs, games and any software to make sure they are reliable, fully functional and user-friendly before they are released to the public. They use a test plan to inspect thousands of lines of code to make sure they are error free. Results are fed back to the project leader so that issues can be fixed. QA analysts can be involved in the early stages of projects in order to anticipate pitfalls before work begins. Employers tend to prefer graduate QA analysts to have a degree in an IT-related subject.

Key skills include:

analytical and investigative thinking | communication | attention to detail | strong programming knowledge



The different sectors

As well as choosing between different job roles, IT professionals can work in a range of sectors. Here are some of your options.

Automation and AI

AI concepts have been around since the 1950s, but they have only become mainstream now we have the hardware and computational power to implement them. You'll be building and implementing the systems that will define how people use technology in the future. Larger organisations run graduate programmes with the option to specialise in AI and there is demand for new talent in start-ups.

Cyber security

Cyber security skills are very much in demand, with more and more individuals and organisations facing leaks, hacks and cyber attacks. You could work in consulting (conducting risk assessments and advising clients on how to protect their organisations; engineering (designing and building IT to ensure it is safe and secure); and operations (monitoring for signs of an attack and simulating attacks to explore vulnerabilities).

Defence

Protect the security, independence and interests of the UK. The sector can be divided by capability areas such as analysis, counter terrorism and security, cyber, integrated survivability, C4ISR (command, control, communications, computer intelligence, surveillance and reconnaissance), CBRN (chemical, biological, radiological and nuclear), weapons and human capability. In the UK, defence is linked to the government and a lot of the work is classified.

Financial services

Fintech – financial technology – refers to any technology in finance that replaces traditional ways of doing things: mobile banking, online-only banks, contactless payments, chatbots, algorithmic trading, cryptocurrencies, open banking and insurtech. You'll be working with emerging technologies that are as cutting edge as what you'd expect in Silicon Valley, and using these to support the global financial system.

Health informatics

Use technology to improve patient outcomes. Employers include tech, pharmaceutical, research, insurance and private healthcare organisations, as well as the NHS. You'll manage and develop a range of important data and systems, whether that's to make sure somebody gets the right medicine or an appointment happens as scheduled. Constraints on money and strict regulation in hospitals and clinics mean efficiency is vital.

IT services

Supply the systems and computer programmes that businesses use on a daily basis. You might work for an IT services supplier, writing code and building applications for clients. These could be general services sold to multiple clients or a specially-commissioned project for one client. Other large organisations (eg a bank, car manufacturer or TV production company) often have enough demand for a dedicated team to deliver IT services that are purpose-built to meet their specific needs.

Telecoms

The goal of the telecoms industry is to make communications possible, wherever you are in the world. There's three sides to the industry: everything that the users see (telephones, broadband, mobile devices and apps), the infrastructure behind the scenes that make these possible and the infrastructure behind the cloud. You might work for a tech giant, start-up, hardware manufacturer, service provider, software company or IT consultancy.

Technology consulting

Businesses in all sectors turn to technology consultancies – they might need help facing a particular business challenge, they might be interested in a new piece of technology or they might need help merging the tech of two businesses. This job is all about understanding what clients want to achieve and advising on how technology can help them deliver those outcomes. Travel is required – you will often be working away from home at a client's offices.

Fact vs fiction: the quiz

IT and technology have become a constant feature of the news, whether the story is on skills or the latest disruptive innovation. So, have you been paying attention? Some of these statements about IT news and careers are facts, while others are fictitious. Have a go at sorting the truths from the myths and then turn over to check your answers.

1. Sizing up the cyber threat

Cyber crime has overtaken the global drugs trade in terms of monetary value.

FACT? FICTION?

2. Sizing down to get your first job

Most graduates get their first IT job in an SME (a company with 50 to 250 employees).

FACT? FICTION?

3. Slow off the starting blocks

15 months after graduating, graduates in IT subjects have one of the highest unemployment rates for all subjects.

FACT? FICTION?

4. Women in IT

We have finally reached a point where women make up half of the UK's IT workforce.

FACT? FICTION?

5. Rise of the machines

Artificial intelligence and automation will develop to a point in the next ten years where all jobs for humans will be obsolete.

FACT? FICTION?

Fact vs fiction: the answers

How did you do? Find out how your industry knowledge stacks up.

1. Sizing up the cyber threat

FICTION. For now at least. Cyber attacks *are* considered to be posing a large and growing threat to national security, be that individual cyber criminals stealing personal data or state-sponsored groups undermining democratic processes. The global cost of both cyber crime and the international drugs trade are hard to quantify. However, a 2018 report estimated that cyber crime cost the global economy 600bn USD*; meanwhile, in 2017, the international drugs trade was estimated to be worth between 426bn and 652bn USD**. The two are certainly comparable in cost, which is noteworthy in itself, but for the time being the upper bounds of the drug trade's cost *just* beats out cyber crime. Of course, with an increased need for cyber security comes an increased need for experts in this field and a growing number of job opportunities.

*McAfee and the Centre for Strategic and International Studies

**Global Financial Integrity

2. Sizing down to get your first job

FACT. There are plenty of opportunities to get onto a graduate scheme with a large employer, such as those advertising in TARGETjobs *IT & Technology*, but the lion's share of graduate IT vacancies are with small- or medium-sized businesses. This is hardly surprising when you consider that, at the beginning of 2019, 99.9% of private sector businesses were SMEs according to the Federation of Small Businesses. Read more about the benefits of working for an SME on page 26.

3. Slow off the starting blocks

FACT. Data from the Higher Education Statistics Agency showed that 6% of computer science graduates who graduated in the 2017/18 academic year were unemployed 15 months after graduation. Computer science graduates are most definitely in demand, so it could be that many graduates aren't looking in the right places or have neglected the soft skills that employers want to see. Make sure you stand out – you can find out more on page 18.

4. Women in IT

FICTION. It's not even close, sadly. Anecdotally, recruiters have been reporting a small rise in the numbers of female applicants to graduate schemes. Yet WISE (Women into Science and Engineering) reported that, in 2019, just 16% of the computing workforce were women. The good news is that there are numerous events for female students to network and explore IT careers, such as TARGETjobs' *IT's not just for the boys!*

5. Rise of the machines

FICTION. Fortunately, or unfortunately depending on your perspective, your graduate job is unlikely to be given to an AI any time soon. While AIs are becoming more and more capable, due to developments such as machine learning, they're still nowhere near as versatile as human beings – they tend to be very good at the one thing they're designed for and not much else. While AIs are likely to become commonly used for menial or time-consuming tasks, more complex, creative and strategic responsibilities will still require people… for the near future, at least.

More help...

Now you've finished reading this publication, head to **targetjobs.co.uk**.

You can:

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- Browse our A–Z of job descriptions and find out more about hundreds of different roles
- Watch our #GradStories video series to hear from graduates at employers ranging from Amadeus to Sky
- Test yourself using our Graduate Benchmark and find out how well you can do in standard employer aptitude tests
- Research organisations you're interested in working for using our employer hubs
- Register to attend a TARGETjobs networking event such as IT's not just for the boys! or enter the Undergraduate of the Year Awards
- Explore your postgraduate study options and course providers at **targetjobs.co.uk/postgrad**

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