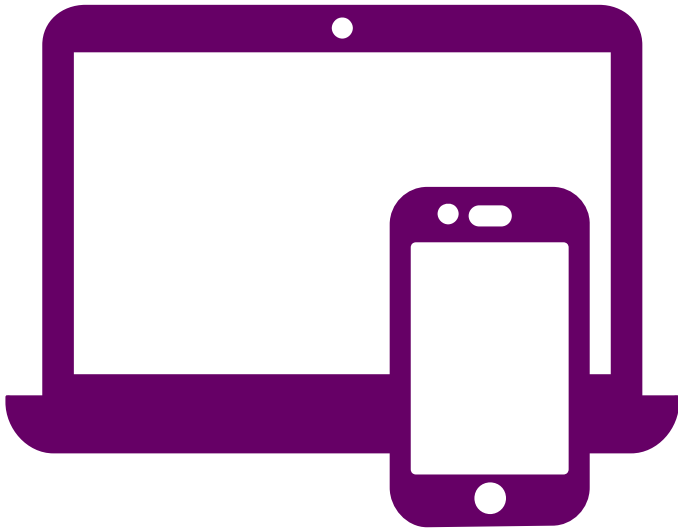


Getting into... **Tech**



There are a large number of tech roles available for graduates in almost all industries, and many do not require a degree in a tech-related subject. As well as more well-known areas of tech, like software engineering and tech support, there are newer areas such as Fintech that are growing rapidly.

As more organisations turn to technology as a way to become more effective and efficient, more areas are likely to emerge.

What's in this guide?

Part One Exploring Your Options	1
Part Two Getting Industry Ready	4
Part Three Finding Opportunities	9
Part Four Resources	11

Exploring Your Options

There will be many roles and employers that we don't cover here – use these common examples as a starting point when exploring your options.

Typical areas

Big data

Big data is a growing area, working with large datasets which cannot be processed using traditional computing techniques. **Job titles include:** Data Analyst and Data Scientist (can be found across a range of industries).

Cyber security

Safeguarding organisations' networks and computer systems and protecting data by implementing technical solutions (e.g. firewalls, anti-virus software) as well as developing security strategies and policies. **Job titles include:** Cyber Security Analyst and Systems Engineer.

FinTech

FinTech (financial technology) is a growing area and involves developing tools and systems to support the financial services sector. **Job titles include:** Sales Executive and Database Developer.

Games development

Creating and producing games for a range of platforms including consoles, arcades, online, tablets and other handheld devices. Comprises a number of areas including design, programming, art and animation. **Job titles include:** Games Developer, Game Programmer and Animation Engineer.

Network engineering

A heavily technical role, involving creating and maintaining networks (e.g. LANs, local area networks and WANs, wide area networks) for organisations. **Job titles include:** Network Engineer, Network Architect and Telecomms Specialist.

Software development

Writing, developing and testing new software across a range of sectors. The mobile app industry in particular is booming, and there is high demand for app developers. **Job titles include:** Software Engineer, Application Developer and Software Architect.

Technical support

Monitoring and maintaining computer systems and networks, troubleshooting and resolving IT problems. You will likely develop skills including diagnosing user issues, time management and providing customer service. **Job titles include:** Technical Support Analyst and Helpdesk Support Analyst.

Web development

Designing, building and maintaining websites and apps. Front end developers focus on layout and user experience while back end developers write the code which enables the website or app to work. Full stack developers work on both front end and back end tasks. **Job titles include:** Web Developer, Web Designer and UX Designer.

Technical architecture

Supervising an organisation's technical work (or IT architecture). This can include more specific roles such as: *Applications (or software) Architects* who take the lead on individual parts of major IT projects and also carry out hands-on technical tasks, *Solutions Architects* who lead projects to solve business problems, *Enterprise Architects* who have responsibility for an organisation's IT strategy and direction and *Infrastructure architects* lead on projects involving hardware and infrastructure equipment.

Other areas where your tech skills could be useful include roles in business analysis, sales, and marketing.

Typical Employers

Because technology is crucial to most organisations, you can find roles in all industries, from financial services and manufacturing to retail and the public sector.

SMEs (small and medium-sized enterprises)

These are organisations with fewer than 250 employees and cover all sectors, including anything from a local high street law firm to a successful technology start-up, offering a diverse range of opportunities for graduates.

It's important not to narrow your options by only thinking of companies you are familiar with. Also, remember that whilst many large tech companies are based in London, other 'technology cluster hubs' in the UK include Birmingham, Brighton, Cambridge, Edinburgh and Leeds. SMEs advertise vacancies throughout the year, one to three months before the start date.

In-House IT Services

Lots of organisations will have in-house IT departments (rather than outsource their IT support). This is common across lots of sectors, which means the opportunities and working environments available will vary significantly in different types of organisation.

IT Services companies

IT services companies provide services (e.g. software development, programming, systems analysis and testing, user support) for companies and organisations which don't have the relevant in-house experience.

IT Consultancy

Consultancies provide advice to a variety of organisations on how technology can make their businesses more effective and efficient. They also provide advice on software solutions tailored to specific business needs. Consultancies vary in size from large companies to boutique firms with only a couple of employees.

Start-ups

Newly emerging businesses, or start-ups, are often looking for technical expertise to help them to develop and maintain products, including websites and applications. Skills commonly required include coding, front and back end development.

Take a look at [Prospect's Information Technology page](#) to find out more about the types of roles and employers you can expect to find.

Getting Industry Ready

In this section, we will talk about the kinds of skills and experiences employers might be looking for within this industry, and how you can go about gaining them yourself. What employers are looking for will vary depending on the role, but below is a general overview of key areas you might like to think about. It is important to always read the job description and person specification carefully to see exactly what the job responsibilities are, and what skills and experiences are required.

What employers want

Qualifications

Postgraduate study is generally not essential, and many employers will support you with additional training and development as necessary. However, further study could be an advantage, so it is worth speaking to your preferred employer first to see what their requirements are. You could also read job descriptions for junior and senior positions in the area you're interested in to find out what qualifications are typically required. You want to be certain that taking a particular course will enhance your prospects!

Many tech-related degrees include industrial placements, during which you can develop the skills that employers are looking for. If your first degree is unrelated, a master's degree in a technology related subject could allow you access to the industry. IT conversion courses are offered by a number of universities, for students looking to gain skills equivalent to a computer science undergraduate course.

Skills

Here are some key skills many employers within this sector are looking for when hiring graduates. As was mentioned before, it is important to always read the job description and person specification carefully to see exactly what the job responsibilities are, and what skills and experiences are required for that role.

Project management - Ensuring that projects are completed to deadline and within budget.

Communication - Explaining complex concepts simply and clearly, sometimes to colleagues or clients who do not have a technical background or role.

Customer focus - Working to the customer's specifications and providing a high level of service.

Teamwork - Building effective working relationships with people in a variety of different job roles (some with limited technical knowledge) within your organisation and when working with external organisations.

Attention to detail - Maintaining focus and completing work to a high standard. This is especially important when carrying out tasks related to analysis.

Adaptability - Enjoying taking on new challenges and dealing with issues as they arise, some of which might be unexpected.

Innovative - Continuously developing your skills, not only for personal progression, but also to understand new developments in the field.

Problem solving - Taking a logical approach to identifying and resolving issues.

Technical skills - In addition to Python, languages such as Java, C++ and C# are highly desirable for many web development roles, as well as a knowledge of database technologies such as SQL. For web design and other creative roles, an understanding of CSS, PHP, JavaScript, XML and HTML may be expected. Experience with iOS and Android platforms would be useful if you are interested in app development.

Platforms such as [Amazon Web Services](#) could be of use depending on your role and organisation. Check job descriptions for the type of role you are interested in to find out what technical skills are required.

Commercial awareness

Commercial awareness proves your interest and enthusiasm for the role and company. You could be asked about this at interview e.g. 'What challenges are currently facing the IT sector?'. Have a good understanding of the company and who its customers are, as well as its competitors. What makes them different? Be aware of their products or services - what is selling well?

Read the company's website, browse their social media and visit the websites listed in this guide to develop this knowledge. Keep up to date with industry developments by following relevant organisations on social media (e.g. [@bcs](#)), browsing technology websites (e.g. [Guardian Technology](#)) and reading relevant newspapers and magazines.

How to gain relevant skills and experiences

Think about the technical skills you enjoy and that you see as your strengths, the areas/skills you need to develop (which you believe you will enjoy developing), the kind of problems you like to solve and the type of environment you work best in – this can help you to decide on the type of IT career which is right for you. For example, how much coding do you want to do on a daily basis? Do you enjoy troubleshooting?

Build your online presence

Create a Twitter and LinkedIn account to start building your own social media presence. Showcase your development and design skills by creating an online portfolio and/or a GitHub account (or any other Open Source account) which you can include a link to in your CV. This demonstrates evidence of your skills to an employer.

Personal projects

Get involved in hackathons, online training, building your own websites and any opportunity to develop or gain new skills. This will look great on your CV and give you a sense of what you enjoy, whilst clearly demonstrating your passion to an employer. Volunteering, including non IT-related, is also highly valued by employers.

Employers will most likely require more skills than those you will have learnt in your degree, so work on developing your programming skills in your free time. Work in tech is constantly changing, so throughout your career you will need to learn new skills and languages, and adapt to developing technologies.

Take on responsibility

Take on positions of responsibility, whether voluntary or paid. This could be a Team Leader at work, or a committee member for a university society.

Short courses

Taking a short course or teaching yourself a new skill can help you to stand out from the crowd. Some are free and many are certified, giving you a qualification for your CV. You can use YouTube tutorials, as well as short course platforms like LinkedIn Learning (which you have free access too as a QMUL student), Code Academy, Coursera and Future Learn.

How can Careers and Enterprise help you?

There are a number of ways Careers and Enterprise can help you build skills and prepare for applying for opportunities.

Appointments

We have a range of one-to-one appointment types with expert careers consultants. These include [Career Guidance appointments](#) where you can talk about your options and ideas, [Application Advice appointments](#) where you can have an application or CV checked before submission and [Practice Interview appointments](#) where you can practice for an interview you are invited to.

Events

We hold a range of [careers events](#) throughout the year where you can learn more about an industry, network with employers and find out what people look for in a graduate.

Programmes

If you are looking to develop your skills, we have several [skill-building programmes](#) that you can apply to and complete alongside your studies.

Online Resources

Our bank of [online resources](#) is a great place to go for careers support. We have guides (such as [this one](#)), templates for things like CVs and applications, as well as tools that you can use to build or improve a CV ([QM CV Builder](#)), practice for a psychometric test ([JobTestPrep](#)) or practice for a video interview ([Interview Stream](#)).

Make the most of work experience opportunities

Once you have found a work experience opportunity, it is important to make the most of it! Here are some things to keep in mind before, during and after the opportunity.

1. Discuss your expectations with the employer at the start, so that you have the same understanding of what the experience will involve.
2. Always be polite, motivated and interested. Work experience can involve boring tasks, but being flexible, helpful and willing to get involved will make a good impression and could lead to more opportunities.

3. Be inquisitive and learn everything you can about the way the organisation works. How do they hire? What key skills are they looking for? What are the main issues affecting the organisation at the moment?
4. Talk to people who work at the organisation and find out what they do and how they got there. You might uncover job roles and employers that are new to you, as well as pick up some helpful tips. Keeping in touch with people you meet can be a great way of finding out about future opportunities and expanding your network.
5. Ask for feedback at the end of the placement to identify your strengths and the skills you need to develop further.

For more information on where you can develop your skills and experiences, see the Resources section.

Finding Opportunities

Think about your motivation for working in the sector and identify causes you are interested in, to help you on your search for opportunities.

Gain work experience

Apply for work experience and internships. This doesn't have to be IT related, and could help you to secure longer term positions. There is no one way to find a job – using a number of different approaches, such as applying to advertised vacancies, networking and sending speculative applications is likely to increase your chances of success.

If you have the opportunity to complete a year in industry as part of your degree, this would give you valuable experience for your CV. Placements are very highly valued by employers and will enable you to further develop your technical skills.

Build your online profile

LinkedIn is a crucial tool for job-hunting. Update your profile regularly, highlighting your accomplishments, particularly your technical skills. Ask for recommendations from people you have worked with previously, and request connections with people you already know. Research companies you would like to work for. Follow organisations you are interested in on LinkedIn and Twitter to find out about current trends and develop your commercial awareness. This is fantastic information that can help you prepare for applications and interviews.

Speculative applications

Sending speculative applications, which is enquiring whether organisations have any work opportunities available, can be an effective approach - particularly if sent to a 'warm contact' i.e. someone you have interacted with before at an event or on social media. You could apply to a local IT services company, for example, explaining your interest and enthusiasm for the organisation. Many opportunities, especially in smaller companies are not formally advertised, so you could find yourself in the right place at the right time!

Start a business

Starting your own business or social enterprise is a fantastic way to learn about how business works. Whether it is a success or not, you will gain valuable practical experience of setting up and running a business. This will help develop important skills, such as initiative and personal drive, which will be valued by potential future employers. It will also give develop solid commercial awareness.

Networking

Networking is about making connections with people who you can contact for information and advice. Attending careers and industry events is a great way to meet people working in the

9

areas you are interested in, where you can gain first-hand information about jobs and how to improve your chances of being hired.

As well Careers and Enterprise events, look out for conferences, fairs and discussions taking place in your department or across London. LinkedIn, Twitter and online discussion boards are also excellent places to build your contacts and ask questions. Connect to individuals and organisations that interest you and use keyword searches to explore related feeds and discussions you can follow. This is an excellent method to build your awareness about an industry, which will impress employers at application and interview.

Temping

Temping (a series of temporary jobs in various companies through an agency) allows you to build your skills, experience and network of contacts, whilst trying different roles and organisations. Knowing the type of work you are interested in is helpful, so you can be specific about what you are looking for. Previous experience may be necessary. See vacancies through QTemps – the Careers and Enterprise recruitment service, and search Agency Central for information about external recruitment agencies.

Resources

Exploring Your Options

[British Computer Society](#)

Advice from the Chartered Institute for IT covering qualifications, events and more

[British Interactive Multimedia Association](#)

Includes directory of members, which is an excellent way to find potential employers

[Computer Information Centre](#)

Huge online library of resources covering IT systems, events and publications

[Computer Weekly](#)

Directory of IT resources across a range of sectors

[Prospects](#)

Overview of the IT sector, including graduate case studies

[Tech Skills](#)

Useful resources section containing factsheets and current trends in the tech labour market

Finding Opportunities

[CW Jobs](#)

Specialist IT recruitment website, featuring a range of graduate level roles

[EFinancial Careers](#)

Tech roles within finance

[Gradcracker](#)

Browse work placements and graduate opportunities IT

[Graduate Jobs](#)

Search graduate IT vacancies and browse career advice

[Rate My Placement](#)

Find IT & technology internships and placements, and browse employer reviews

[Target Jobs](#)

IT jobs board with graduate jobs and internships from Target Jobs

[Work in Startups](#)

Browse technology roles and short-term internships in newly formed businesses Industry information

[Workfinder](#)

Browse technology roles and short-term internships in newly formed businesses