opportunities in Ireland, north and south

sectors include IT, web development, project management & software testing

useful contacts

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Introducing your career in technology

Technology is one of the fastest growing career sectors in Ireland today, with over 40% of employers across all sectors seeking technology graduates. The skills and know-how of tech graduates are in demand across all areas of business and industry. Creative and innovative graduates are well rewarded in technology, while a high level of accuracy and attention to detail is also required. If you possess the necessary qualifications and attributes, your outlook is positive, as Ireland is now considered one of the global centres of the technology industry and has become the world’s second largest exporter of tech services, with the sector accounting for over €50 billion of exports. Over 730 Irish companies work within the industry while over 200 more international companies are supported by the Industrial Development Authority. Northern Ireland’s tech sector is a massive employer, contributing more than £1.5 billion to the economy. Over 100 international tech investors are in Northern Ireland, making it one of Europe’s leading investment regions for technology and software. 13 university related research centres exist in Northern Ireland in such tech areas as security, wireless technology, digital media, semiconductors and telecommunications.

Ireland is home to the following
- Eight of the world’s top 10 global software companies
- 16 of the top 20 global technology firms
- 10 top ‘born on the internet’ companies
- Nine of the top 10 US tech companies
- The top three global enterprise software companies
- Four of the top five IT services companies
- Three of the top five games companies
- Nine of the world’s top 10 medical technology companies.

Roles currently in demand in Ireland’s technology sector include
- Applications developers
- Business analysts
- Client account managers
- Database administrators
- Foreign language tech support
- Games testing and design
- Programmers proficient in programming languages like Java, Oracle/SQL and .net
- Systems analysts/engineers
- Technical analysts
- Technical architects
- Technology security analysts
- Technology technicians
- Test engineers
- Web developers

What if you don’t have an technology degree?

A technology specific degree isn’t essential for a career in the sector, as such diverse skills as finance, marketing, HR and sales are also required. If you do wish to pursue a career in the strictly tech-oriented side, most colleges offer conversion courses specifically designed to convert your current academic path into one more in line with the technology sector. University College Cork’s Higher Diploma in Applied Computing Technology and TU Dublin’s Higher Diploma in Science and Computing are two examples of courses that provide non-technology graduates with the opportunity to acquire the theoretical knowledge and practical experience the technology sector demands. Visit gradireland.com/further-study to find the right conversion course for your needs. Find out more about conversion courses in technology on page 26.
Employment trends
With so much growth in Ireland's technology sector, it's a great time for graduates with the necessary skills and competencies. According to a study by the *Expert Group on Future Skills Needs* (EGFSN), annual vacancies for High Level ICT professionals are set to increase from a projected 12,920 in 2019 to 17,795 in 2022. Areas predicted to account for the highest demand include artificial intelligence, big data and analytics, blockchain, cloud computing, cyber security, the Internet of Things, micro and nano-electronics and 3D printing.

Ireland's tech sector employs more than 105,000 people and is now the highest-paid sector of the Irish economy. 40% of Ireland's GDP comes from its tech sector. The country is now the go-to choice for the location of international tech headquarters. Three quarters of jobs in the sector go to those with third level qualifications while the most common age group hired is 25–34, accounting for over 40% of new hires. This illustrates how postgraduate applicants and those transitioning from other sectors are successfully being hired in the sector. Technology accounts for the largest share of new employment permits issued in Ireland each year. This creates a challenge for companies seeking the right graduates and jobseekers. More than half of the employment permits issued went to positions offering salaries between €30,000 and €50,000.

What do you need for the technology sector?
Technology professionals are expected to possess the qualifications and certifications from both the relevant undergraduate degree, and/or a successful conversion course. They must also be highly adept and motivated problem solvers with the ability to take the initiative and work well within a team. Technology is a constantly evolving and rapidly changing industry that requires its employees to challenge themselves, acquire new skills and grow in their positions. When considering an employer, be sure about the requirements of the role you’re interested in and what requirements your prospective employer may have. It's wrong to assume that a technology degree will allow you to walk into any graduate technology position, as employers will also look for any extra soft skills and attributes you can bring to the role. New skills can be honed by taking free online courses, or getting involved in collaborative projects in university, this will illustrate your level of motivation to your prospective employer. Technology recruiters may sometimes require skills that you haven’t acquired in your technology degree. Most applicants will share more or less the same level of qualification, so it’s important to stand out with any extra attributes you can offer.

Hard to fill roles and specialist areas
According to EGFSN data, over a third of ‘difficult to fill’ roles are vacant in the Technology sector. Candidates in possession of cross-disciplinary skills are in high demand in the sector, especially those with skills applicable to technology/programming along with analytical skills. Graduates may be incapable of accessing these roles directly, but taking a course in computing science and software development will develop the necessary skills for such roles as:

**Business intelligence**: In terms of analysis, this is an area that crosses over into ‘big data’, with companies seeking those with skills in enterprise software, such as SAP and Oracle.

**Engineers**: Network engineers with Linux or Open Source skills, quality assurance and testing skills and experience will find good career opportunities available.

**Management**: Recruiters are constantly seeking those with leadership potential, especially in the technology sector where project managers and digital marketing experts are expected to roll-out the creations from the technical side and market them to the world.

**Software development**: Tech employers are looking for software developers with experience and skills in .net, C#, C++, Java, PHP, Python and user interface and user experience technology. With mobile technology becoming increasingly prevalent, graduates with skills related to mobile applications and support are in high demand.
What sector would suit you?

In the modern world, technology plays a huge role not just in our daily lives, but in practically every organisation, business and institution. Possessing the right qualifications gives you the opportunity to work in a variety of different circumstances, be it through self-employment, working for private industry, the civil service or for an NGO or charity.

Jobs in the tech industry have become diverse, covering everything from designing and programming computer systems to testing and maintaining those systems to training other IT professionals. The range of employment possibilities open to technology graduates is now quite vast.

The three types of technology employee

Employees account for the majority of the tech industry’s workforce. Working for a single employer and receiving a set salary might be the plan for most graduates, but there are more options available for qualified professionals in today’s marketplace.

Contractors are professionals provided by an agency to work on location and are usually paid by the hour. Contractors are expected to be specialists in their chosen field who can offer skills unavailable elsewhere in their clients’ organisation.

Consultants specialise in offering solutions to their clients’ problems. As they usually run their own business, provide their own technology and operate without an agency, their earnings are generally higher than contractors.

Graduates may be attracted by the greater flexibility offered by contracting and consulting work, but a considerable amount of experience is required for both these areas.

Where can technology graduates work?

As technology is used to some degree in every organisation and institution, technology graduates can find employment in practically every sector. Technology employers include:

- IT services organisations
- Technology solutions providers
- Technology consultancies
- Telecoms companies
- Insurers
- Accountants
- Software houses
- Games developers

Sectors you may have overlooked include

- Financial technology (fintech) – While most large financial institutions have their own software teams, they also outsource development activities to specialist software development companies. If you wish to work with mathematical models, large data sets, distributed systems, high speed systems and security, this could be your path into the financial sector without moving in-house.
- Professional services – Technology experts from professional services firms provide specialist advice to help other businesses avoid technology problems in their accounting, security and legal compliance processes. They assess how organisations run their IT
systems, evaluate risk and make recommendations to help their clients protect and handle their data correctly.

• Retail – The past few years have seen huge growth in e-commerce, resulting in a high demand for technologists with the relevant skills. Many retailers are currently focussed on developing multi-channel shopping options and technology is also essential to other areas of a retailer’s business, such as coordinating its supply chain and analysing sales performance.

• Banking and investment – Investment banks recruit technologists into both support roles (keeping the IT infrastructure up and running) and in-house software development.

• Engineering – Engineering companies recruit technology graduates to develop their core projects and support their business systems.

What do you want from your job?

Tech graduates with the right skills have a wealth of options, so it’s important that you find the employer and career best suited to your needs. Two key factors should be taken into consideration before you begin your search.

• The work you want to do – Are you seeking a role that requires a lot of coding, or none at all, while still employing your technical reasoning skills? Are you a more business focussed person? Maybe you wish to combine both the technology and commercial worlds? Are you looking for a role that offers new assignments on a daily basis, or would you prefer to work on projects with longer deadlines? If you are still undecided on a specific role, your best route could be to find an employer that offers a graduate programme that allows you to experience a variety of roles in numerous business areas.

• Are you prepared to be mobile? – The number of opportunities available can depend on your willingness to work on a mobile basis. A consultant may be required to spend their full working week on-site, spending four or five nights in a hotel room and catching a flight if they wish to return home for the weekend. Workers in IT services may also be required to spend the week on their client’s premises. If you prefer to spend most of your time working in the same office, you should opt for a more technical role like a developer or software tester. Falling somewhere between mobility and stability are business and management-focussed roles (e.g. project management), which may require some travel, depending on the role and the company. Most tech professionals claim travelling and sleeping in hotels are the least endearing aspects of their jobs while others embrace the lifestyle. How mobile are you really prepared to be?
What skills will you need?

There is a massive demand for graduates with the right blend of skills throughout the technology sector. Find out what employers are looking for and give yourself a cutting edge in the recruitment and selection process.

**Hard skills**

If you’re seeking a career in a tech-heavy role like software developer, software tester or network engineer, you will need to be proficient in the relevant programming languages and possess the technical skills employers seek. Some employers have noted a skills gap among graduates in these areas; so you may need to invest in extra study beyond your degree to acquire all the skills necessary to land the job you desire. Spend time researching the specific skills you need to develop for the types of IT graduate schemes that interest you, and invest time outside of your university studies to acquire these skills.

Having a range of programming languages will broaden the range of career opportunities open to you. Areas related to programming are among those in highest demand. While Java is hugely popular, graduates with such languages as C#, .NET, C++, HTML5 and Python are also sought by many employers, as are those with a strong understanding of digital design. Employers often find that the graduate candidates most well versed in the relevant programming languages have acquired their skills through work experience, or they are programming hobbyists who spend their own time developing their programming language skills. Such individuals have the advantage of being able to display their ambition and enthusiasm for this area.

If you can show a prospective employer a practical example of your skills in use, rather than simply your qualifications, you will have an immediate advantage over other candidates. While in university, build a working website for yourself or a family member’s small business, or if you’re confident enough, establish yourself as a freelance web designer while studying. The ability to show that you already have the trust of clients of your own (even if it is only a relative) will be appreciated by potential employers. Plus, it’s a way to make some extra cash before you land a graduate job. While in university, think about founding a club or society based around your interest in coding or designing. Not only will this help you develop your skills and learn from your peers, it will show employers that you have initiative and leadership skills, and enjoy being part of a team.

An area where invaluable experience can be easily gained is in the world of Open Source projects. Open Source Software (OSS) is software whose copyright holder has made its source code available to the public to develop and work with. Users are encouraged to find solutions to problems within the code, or to add to the code. Hundreds of Open Source projects are looking for contributors at any one time, with most adding their projects to github.com, where you will find Open Source projects from a variety of sources; even the US government’s usually secretive National Security Agency has begun to share Open Source code. This gives you a chance to gain experience and add some very impressive names to your CV. It will also show employers that you possess the ability to contribute to team projects.

**Soft skills**

While your technical skills are your bread and butter when it comes to landing a role in IT, it’s not the only thing employers will look for from applicants. Particularly for more business-focussed roles like consulting, IT graduate schemes will require soft skills and commercial awareness. For such roles, technical graduates will often find themselves competing with arts or social science graduates, so developing your soft skills is vital.

The five most essential soft skills you should work on developing

**Communication** — Technology may be present in every business, but it still takes humans to run those businesses. IT professionals are
required to possess an ability to communicate effectively with people at all levels in an organisation, from PC end-users and helpdesk assistants to company directors. An ability to listen and understand, and to explain the relevant technology to clients with varying degrees of understanding of said technology, is crucial. Those IT professionals in client-focused roles must be able to communicate clearly with clients to understand and define system requirements. Demonstrate your communication skills by keeping verbal and written communication clear, concise and confident. Display an understanding of your audience and an ability to tailor your communication to them. Show that you can listen to and consider the views of others; and think before you speak.

Planning and organisation – IT is a project-focused industry, one in which good planning and organisation skills are essential. The need to manage tasks on a variety of projects with differing deadlines and competing priorities means effective planning, and the ability to anticipate problems and challenges and transform them into positive opportunities is a must. Demonstrate your planning and organisation skills by showing that you can add structure to a task or project; highlighting how you scope out an activity and allocate time to individual tasks. Display how you anticipate challenges and issues that could arise and plan contingencies.

Drive and enthusiasm – To work in this incredibly fast-paced industry, drive and motivation are essential. Candidates need to enjoy accepting new challenges, pushing boundaries and looking towards the future. Graduate recruiters appreciate enthusiasm from their candidates because they know enthusiastic people are motivated people. Demonstrate your drive, motivation and enthusiasm by displaying your determination to achieve an end result and demonstrate that you can maintain your optimism and enthusiasm, even when things get rough, showing an ability to bounce back from setbacks by knowing what makes you tick and what types of tasks and activities you most enjoy performing.

Problem solving – Working in tech requires an ability to define problems in a timely manner, identify the root causes and subsequently gather the relevant information to find appropriate solutions. But problem solving goes beyond resolving technical issues alone. You may also be required to suggest enhancements to existing procedures and processes to deliver improved service, a better product and most importantly, satisfied clients. Demonstrate your problem solving skills by displaying that you can take a logical and analytical approach to problem solving. Show that you can view problems from a number of angles; demonstrating that you can anticipate potential pitfalls and act to prevent them happening.

Teamwork – Teamwork is essential for sharing knowledge, establishing and building relationships and supporting the people involved on a project. It requires interpersonal skills and, at times, leadership qualities so that you can consider and respond appropriately to the behaviour and motives of others, adapt your personal style accordingly or step out in front to bring others with you. Demonstrate your teamwork skills by displaying an ability to build and maintain positive working relationships. Demonstrate how you share information with others, support others and show respect for alternative views. Show how you have contributed to keeping projects on track and achieved a final goal; working sensitively and cooperatively with others; showing how you have considered and identified what motivates others and how you have led by example.
Tech sector salaries

Graduates landing jobs with employers in the IT sector can expect, on average, to earn just over €30k in their first graduate job, according to gradireland research. Technology is an area with strong earning potential but remember to focus on the right job and develop your skills first.

According to gradireland’s data, 45% of graduate roles available are open to those with technology qualifications. Like last year, the sector is performing well in terms of starting salary, with €31,701 the average, although many roles can quickly offer much more.

Should I negotiate?
At entry level there is rarely room to negotiate a higher salary, however some IT companies do have salary ranges. Your placement within these will depend on your academic qualifications, previous experience and performance in the selection process. You should research and find out exactly what level of experience and education will land you the starting salary you deserve.

A recent study by the Central Statistics Office found that graduates from technology courses earn significantly more in their first five years after leaving college than other graduates, earning an average of €815 a week.

Do postgrads earn more?
If you possess a masters degree or PhD, some employers may place you on a higher starting salary. A postgraduate degree is one factor that could contribute to a higher starting salary.

Future earnings
The average salary for an experienced IT professional varies greatly depending on whether they are in support or development, or are a contractor. Personal motivation and your willingness to push yourself will determine how much you can earn.

At the highest end, according to market data, a Chief Technical Officer earns an average of €98,000 nationwide, €103,000 in Dublin. For an IT manager it’s €59,000 nationwide, €61,000 Dublin.

Skills-based pay
According to a report by PayScale, the average salary for a software developer in Dublin is €38,255; for a software engineer €45,147; and for a senior software engineer €62,302.

The average salary for jobs requiring PHP, Python, Cold Fusion, Ruby on Rails, Android/iOS, .NET and C+ skills is €45,000–€65,000. For a senior Front End/UI Developer it’s €55,000–€75,000; for a technical architect €80,000–€95,000; and for an engineering/development manager it can be as much as €90,000–€110,000. Remember that you will need to gain experience and develop and prove your experience in a work environment before you can command any of these higher salaries.
Areas of work

Technology plays a core role in almost every organisation and activity imaginable today. Many areas of work are listed here in the following pages, but make sure you also visit gradireland.com/employers to see a full list of potential graduate employers across all sectors.

Information technology plays a fundamental role in almost every organisation, business and institution. Therefore qualified professionals can find themselves happily working in a wide range of different circumstances; they can be self-employed, working for private industry, operating for the civil service, or acting on behalf of an NGO or charity. Furthermore, the catch-all phrase ‘IT professional’ disguises a huge range of very distinct specialities. ‘Working in IT’ encompasses everything from the fundamental design and programming of computer systems; to the testing, maintenance and support of those systems; to the sales and marketing of those systems to the general public; to the training of other professionals. That’s quite a range of employment possibilities.

Where can you work?
At the most obvious level, IT graduates can find themselves working for the companies that produce hardware and software, but these only account for some of the roles on offer. Nowadays, every organisation and institution uses IT at some level. These range from financial services companies to charity organisations, and it means that graduates can, if they wish, seek work within almost any sector. The job descriptions on the following pages cover the main areas of employment in the software industry; however, it needs to be stressed that job titles can be interpreted very differently from organisation to organisation. In today’s more flexible career market, specific roles do not necessarily imply a clear-cut list of responsibilities. It’s always important to thoroughly research the role you’re applying for.
Programming is at the very core of IT. Many IT graduates start out on their career path as programmers, and programming is the basis of a wide range of processes, skills and activities. But what does it actually involve? Well, the work varies hugely, depending on both the organisation and the software being produced, but all programmers essentially write instructions that a computer can interpret. This means establishing a detailed specification and clarifying exactly what a programme needs to do, then breaking the specification down to its simplest elements and translating this into an appropriate programming language.

Different tasks require different programming languages, but those most in demand are Visual Basic, Java, XML and C++. Most programmers specialise in a few different languages, and the ability to learn and adapt quickly is a must.

There are two distinct areas of expertise within programming: applications programmers and systems programmers (also known as systems developers). Applications programmers write programmes that process and manage incoming information on the computer (database systems): including anything from payroll data to scientific calculations. Systems programmers deal with the internal operations of the computer: this could involve designing diagnostic programs to finding faults, or controlling the way a computer runs several applications simultaneously.

Programmers usually create programmes from specifications designed by systems analysts or borne out of direct consultation with clients – the size and role of the organisation will determine the source. Programmers generally specialise in commercial data work, scientific applications or computing, or programmes for the home or educational computer market.

Working hours are generally a standard seven to eight hour day but this can change depending on the project, and flexibility is important. Programmers can work anywhere – IT and programming language skills are universal and very exportable. The UK and the USA are common destinations; many American companies are based in Ireland so opportunities for transfer within the same company do exist. If you’re multilingual, there are also opportunities all over Europe.

Today’s programmers don’t just confine themselves to, well, programming. With the exception of large organisations, fewer ‘pure’ programming jobs now exist than in the past. An analyst/programmer can successfully analyse a small organisation’s computing needs, design an appropriate system and write the applications programme. In the future, the job of the programmer may need to evolve to include an expanded range of responsibilities, as we’re now reaching a stage where computers can programme themselves from an analyst’s instructions! And programmers, like workers in many sectors, may have to accept that they may not always be in permanent employment, as programming work is increasingly contract and project based, but good programming skills will always be in demand.

So what do you need to become a programmer? Patience, mathematical aptitude and strong problem-solving skills are a must. Being able to work as part of a team is essential, as is proficiency in more than one computer language, along with knowledge of software engineering.

Opportunities for promotion are good; a background in programming is valued in most IT careers as it provides a solid backbone of knowledge. Programmers can discover their strengths and then use their skills to move into other areas; for example, those with a flair for teamwork and communication often end up becoming project managers.
Systems analyst/business analyst

Systems analysts and business analysts bridge the technical divide between skilled and specialised ICT professionals and the less-technologically savvy clients who need their skills. When a business or organisation needs a system to manage information or processes, they often acquire the services of a systems analyst. The analyst assesses and analyses the customers’ needs, creates an exact specification of what sort of application might be required and passes it on to a programmer, after which the analyst will guide the project from coding through testing and onto final implementation. A business analyst’s work is generally similar to that of a systems analyst, but the focus is on processes and activities within the business environment (business analysts will often have a background in business and IT, either through a combined degree or an add-on IT qualification). Both professions need to be fluent and comfortable with the technical and non-technical aspects of the job, cognisant of both the needs of technically less competent end-users and the expertise of the programmers.

In recent years organisations have tended to employ systems analysts on a contract or consultancy basis, so increasingly professionals in the field are self-employed. Generally speaking, however, systems analysts need a few years’ experience under their belts before setting up independently. Many begin in more specialised roles, which equip them with the necessary technical background, before then deciding to move towards the arguably more sociable world of systems analysis.

Indeed, systems analysis requires a lot more of the so-called ‘soft’ skills. Professionals in the field need to be expert communicators, skilled at evaluating their client’s needs and often called upon to work with employees whose very jobs are being turned around (or replaced) by the systems they’re charged with designing. Success as an analyst is very much dependent on an individual’s ability to interpret the needs of their clients, to communicate their requirements to the programmers, and to then see the whole project through to completion. A good systems or business analyst figures out what the job is, and then gets it done.

Web developer

Although no company is without a website, much of the mystery has been taken out of web development in recent years, and this is serving to weed out some of the lower-skilled, template-based pretenders who had been saturating the market. However there are still web development jobs out there for highly skilled professionals and there are new opportunities emerging every day thanks to the explosion in mobile telecommunications and m-commerce (e-commerce through mobile telephony).

At its best, web development is a skilled and interdisciplinary profession involving the design, maintenance and testing of websites and which integrates IT, design and business skills. On the technical side, candidates should be familiar with HTML, ASP, SQL and Javascript, C++ and Visual Basic. But it’s important to note that committed professionals need to keep abreast of changing technology and trends in the field.

The type of work can vary. Some graduates might find themselves working for software companies on the development of web applications, while others will find themselves designing actual websites. Large organisations typically employ their own web developers, and so new candidates can find themselves working within a team for retail businesses, web consultancies, government organisations or software companies. In these environs, a new employee might be involved in only a single aspect of the work (such as programming in Javascript or testing and maintenance), but as they progress through their career they would increasingly be required to liaise with clients and spearhead projects. At this level web development can be seen as a collaborative process with the client, and so people skills as well as design skills are crucial.

Typically, working hours are standard, although flexibility will often be required if deadlines loom. As with many IT professions, travel opportunities are excellent for the skilled professional.
Network engineer

Simply put: network engineers are responsible for computer networks. All organisations and businesses, from government departments to national branches of multinational businesses, need these networks to communicate internally and externally with suppliers, clients and staff. Network engineers are the people who install, maintain and upgrade these networks. In order to do this challenging job, they need to thoroughly understand the hardware and software required for networks to function. Typical activities include installing new server hardware and software infrastructures; allocating network resources; providing technical support and training; implementing and monitoring network security; diagnosing and fixing faults and problems; as well as planning the ongoing development of the whole system. In larger organisations network engineers often start in a technical-support role and progress over time to the position of network engineer. They need to have a very strong technical background, particularly a good knowledge of LANS (local area networks) and WANS (wide area networks), but softer problem-solving, teamwork and negotiating skills are also hugely important. Often the nature of a network engineer’s job will depend on the size of the organisation for which they work. In a large organisation, such as an investment bank or semi-state company, a network engineer could be responsible for just one small aspect of a very large system. In smaller organisations they could have responsibility for every aspect of the network’s smooth functioning.

Communications engineer

As the fields of communications technology continue to expand, with more and more gadgets and more and more service providers on the market, there will be greater opportunities for trained engineers. Those with degrees in science or engineering often begin as entry-level communications engineers, although others have been known to start as installers or repair workers. The work can vary hugely from company to company. On the one hand, trained professionals can find themselves designing or building systems and networks. On the other hand, they may be charged with servicing and maintaining an existing network. One way or another, the role requires a huge level of technical understanding. Candidates should also have a commitment to life-long learning, as it’s a field that is continually evolving.

On top of this baseline of knowledge, problem-solving skills are also critical. While many know the nuts and bolts of how a network works, it takes a particularly persistent and analytical problem-solver to get to the bottom of the issues that can arise in the course of its operation. Indeed, in many cases telecoms engineers are expected to foresee network problems before they happen. Unsurprisingly then, telecoms engineers also need to be capable under pressure, as any disruption of service will need to be dealt with swiftly and efficiently and at a minimum of cost.

As well as having a high level of technical skill, engineers working with communications and telecommunications need to be extremely organised as they are often required to deliver high quality projects and repairs to a deadline and within a budget. Verbal and written skills are also crucial, as engineers will often find themselves working as part of a larger team with non-technical staff who may need to be told how development of the network might affect the end user. Essentially, it’s all about communication, vital in an industry where the objective is ever-more effective methods of communicating.
Technical sales

Many of the careers outlined here are made possible because someone purchases the products they help to create. Technical sales professionals, more than anyone else, are aware of this commercial reality, and as long as software companies continue to win new business there will be a demand for good salespeople.

Technical salespeople tend to concentrate on particular products, services and client sectors, and spend much of their time getting their companies’ products in front of prospective customers. They need not only to source customers but also to maintain contact with them, and to become sensitive to their future needs and requirements. As such, the work is very much about relationships and technical salespeople need to have very sophisticated communication skills (these skills will manifest themselves through tender documents, phone calls, emails and face-to-face meetings).

Technical sales professionals also need to have a good understanding of the technology which they’re selling, as they need to be able to inform customers about its capabilities. Many are computer graduates with an interest in sales or marketing, or marketing graduates with an add-on IT qualification.

Junior technical sales is the starting point for new graduates, with many moving up the career ladder over time. Working hours are usually regular, but the job typically involves a lot of travel, which can result in early starts and late finishes (overseas travel is less likely, as cultural awareness and language skills are very important factors in successful sales).

The role can become more specialised and complex, focusing on areas as diverse as customer support, sales management or training. Over time a technical sales professional may rise to the position of sales manager. In general, technical sales is a very pressurised field with candidates considered ‘only as good as their last sale’ and constantly trying to meet sales targets and deadlines. Great salespeople, however, tend to thrive under such circumstances.

Technical support

Technical support people are the medics of the IT world – they diagnose technology problems and then set about fixing them. They can work for hardware manufacturers, end-user companies or service companies who provide helpdesk and technical support services. Companies with a large number of computers (over 50) will often hire their own technical support staff. Although the role requires an in-depth understanding of most hardware, systems, applications and programming languages, professionals in the field will be particularly competent in the technology relevant to the organisation they work for.

Technical support people are expected to ensure that all systems and applications are running smoothly and seamlessly. Although the work often overlaps with other roles, they are the people at the coalface who roll up their sleeves and face computer problems head on. Core activities include tracking the source of technical faults, identifying viruses and security weaknesses and working with end users (these may be clients or colleagues). In some instances the work may be done entirely at a helpdesk or call-centre, with all communication done by remote-access, telephone or email.

Employment prospects in technical support are broad. People often start out at first- or second-level support. Opportunities for promotion and career development are greater with larger organisations, but movement is an option. It’s an exciting field. New network technologies are constantly emerging with huge implications for the world of commerce. What’s more, destructive trouble-making viruses and other threats are being discovered on a daily basis. Technical support specialists are required to keep abreast of these new technologies and threats.

Opportunities to travel are good, especially for those with specialist, unusual or sought-after technical skills. As nobody knows when a computer problem might strike, working hours can be long and unsociable. Many organisations need a technical support person to be on call 24/7 and work is often on a shift basis, involving regular night work.

Candidates need the ability to think clearly, to work well under pressure, and to be patient communicating with non-technical end-users. Ultimately it’s a perfect job for technically adept graduates who like to solve problems.
Software engineer

Software engineers are those that make IT systems ‘tick’. Essentially, they write and code both computer operating systems and the software that runs within them. The job title actually covers a multitude of roles, from systems developer to software architect. It’s highly specialised work that requires a good technical background, a thorough understanding of software and hardware, and a strong grasp of mathematical reasoning and coding languages.

Depending on the organisation, typical activities include writing and modifying programmes; testing code; diagnosing faults in software; and designing programmes to solve those faults. All of these tasks typically involve a detailed and meticulous problem-solving process. As a result, working hours can be long, particularly when faults need to be diagnosed and fixed by a deadline.

However, software engineering is rarely a solitary activity. It’s usually a team effort, with individual engineers often focused on a small aspect of a more complicated whole, with input required from both colleagues and clients. This means that as well as having a very high level of technical competence and problem-solving ability, software engineers also need to be good communicators.

Typically the first year of a software engineering job could be spent writing the code for a programme or formulating the objectives of a programme under supervision. An average of three years’ experience is normally required before an engineer has a high enough level of technical competence to prepare the detailed specifications from which the actual programmes are written. Over time many engineers get involved in writing and design process. After five or ten years, they often move into management.

Opportunities to travel are good, with many IT operations located in Asia, where overheads are cheaper. There is also a continuous demand for seasoned professionals throughout Europe and the US. Wherever they choose to work, however, a good software engineer needs to be motivated, creative and continuously willing to learn.

Project manager

Project managers lead teams of IT professionals – programmers, analysts and designers – who work together to produce a new piece or system of software. They also consult with and report to clients, and deal with suppliers. Strictly speaking a project manager doesn’t need to be strong on technical skills: the emphasis is very much on management, organisational and people skills. Most project managers, however, have programming or engineering backgrounds; this lends them more credibility with technical team members and equips them better when dealing with clients.

It’s a job for people who can handle a lot of responsibility. At the core of the job is the organisation of both people and time resources, and a project manager is responsible for seeing the project through from beginning to end. It’s not a position for novices; IT graduates need to have at least three or four years’ experience before becoming full-time project managers. They often move into consultancy after they have amassed more experience.

Working hours are normal but overtime is commonplace, and project managers must be ready to deal with whatever obstacles may arise. Opportunities to travel are good, particularly at consultancy level where there is an increased possibility that you will be employed by an organisation overseas.

New opportunities for project managers are emerging all the time.

The electronic and mobile commerce revolution means exciting new software technologies for project managers. And the employer’s focus on ’softer’ people skills, such as communication, interaction, management and negotiation skills, will become even more crucial.

Ideal candidates have a good level of relevant technical knowledge and excellent people skills. Specific project management skills, such as risk management, are also very useful. Project managers need to have a positive, confident attitude. They need to be flexible and able to communicate and motivate people effectively. Initially, they may take on projects part time and move into an established position with time.
Technology is continuously evolving and so too have the jobs within the sector. With the continuing evolution of mobile, cloud, social media and big-data; technology is ubiquitous in everything from our ATMs, smartphones, TVs, fridges, game consoles, in-car entertainment systems to our doctors’ surgeries. All of these devices are powered by increasingly complex software, so reliability and quality is paramount. The software not only needs to function as designed, but it needs to perform, to scale to millions of users, be resilient 24x7, accessible to users of varying abilities and ultimately, it needs to be secure. The ‘gatekeeper’ of this quality control process is the software tester or quality assurance engineer.

Software testing as a career remains somewhat of an enigma amongst IT graduates in terms of the opportunities it offers. A modern software tester performs many roles and requires a diverse range of skills. While developers find creative ways of building software, testers find creative ways of breaking it so that the defects can be resolved before putting the software in front of end users.

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So what does the career of a software tester involve? There are many paths that a tester can take within the IT industry. No longer is a software tester confined to writing and executing monotonous and repetitive manual test cases to ensure the software does what it is supposed to do – these tests can now be easily automated and executed across a myriad of devices out of hours, which frees up the tester to focus on more value-added tasks. Testers need to have analytical skills to ensure requirements are clear and unambiguous. It is important that they are determined and systematic in their search for defects, not just proving that the system works but also that it can withstand the unpredictable actions of the end user.

Software testers utilise troubleshooting skills when investigating why a defect happens and then locate the source of the problem. They require the organisational skills of a project manager to plan testing activities and to be able to work to tight deadlines. Being a good communicator and team player is vital as testers must work with developers, business analysts, project managers and end users. A software tester is a negotiator, an influencer and the provider of information on the quality of the software products and the risks. They should also have the ability to work on their own initiative.

Software testing now encompasses skills more traditionally associated with programming or development. Automation or performance testers use software testing tools (open source or enterprise) as well as scripting languages to find faster, more efficient ways of exposing weaknesses in software. The advantage of this type of work is that it is often ‘green-field’, or starting from scratch. It involves a level of creativity and freedom not always experienced in development roles and provides the opportunity to be innovative. Software testing offers a proven career path to graduates, starting as a test analyst and then growing into test leads, test managers, programme test manager and ultimately head of testing/quality.

Are you curious about how things work? Do you like to break and fix things? Do you like to meet new and diverse people? Are you interested in new technology across all business sectors? Do you have excellent attention to detail? Then consider a career in the world of software testing.
There is expected to be sustained and consistent growth in the area of data analysis and ‘big data’ in general over the next 5 years, as evidenced by the Expert Group for Future Skills Needs (EGFSN) ‘Assessing the demand for big data and analytics skills 2013–2020’ report, published in April of 2014. The report highlights that 21,000 potential job vacancies could arise – comprising 3,630 for deep analytical roles and 17,470 for big data savvy roles. There would also be a further 8,780 potential job openings for supporting technology staff – as noted in the EGFSN report on ‘Addressing Future Demand for High-Level ICT Skills’. Companies envisage that they will continue to need to recruit both experienced individuals and new graduates in these areas in the future.

Data analysis is all about collecting, organising, and interpreting statistical information to make it useful to a range of businesses and organisations. A data analyst is someone who scrutinises information using data analysis tools. The meaningful results they pull from the raw data helps their employers or clients make important decisions by identifying various facts and trends. A data analyst can also be known as a data scientist, data analytics officer or a digital analytics officer.

Some of the roles of a data analyst include:
- Using advanced computerised models to extract the data needed
- Removing corrupted data
- Performing initial analysis to assess the quality of the data
- Providing further analysis to determine the meaning of the data
- Completing final analysis to provide additional data screening
- Preparing reports based on analysis and present to management

There is strong demand for qualified and experienced data analysts but it can be a competitive field. You can gain a competitive edge by obtaining a master’s degree in a field like finance or statistics. Career progression prospects are good in larger companies and organisations.

Data analysts will require a high level of natural mathematical ability and very strong IT skills. Knowledge of coding system like SQL and Oracle would also be a huge benefit, as would be the ability to analyse, model and interpret important data. Data analysts need strong problem solving competencies and a methodical and logical approach to their work with the ability to accurately plan work and meet deadlines. An exacting attention to detail is also a must, as is the ability to coordinate work with others and work effectively as part of a team, with excellent written and spoken communication skills, including report writing.

The usual entry point is a degree in statistics, mathematics or a related subject involving maths, such as economics or data science. Other degrees are also acceptable if they include informal training in statistics as part of the course, for instance social science or informatics.
Cloud computing

Traditionally, users would store their software and data on their own PCs, devices and media drives, but this model is rapidly changing as users are increasingly accessing software and storing their data on ‘The Cloud’, i.e. the internet. For example, anytime you use any of Google’s apps (Gmail, Google Docs, Google Sheets etc), you’re engaging in cloud computing, as all of the data involved is stored on Google’s cloud. Similarly, when you upload your photos to Facebook or Instagram, you’re essentially sending them to the cloud. A new generation of laptops, like Google’s Chromebook, are designed purely to interact with the cloud.

The main benefit of cloud computing is that users can access their data from anywhere they can access the internet. It also removes the worry of losing all your software and data should your PC or device break down. The need to install software on your own system is also eliminated, with online-only versions of popular apps like Microsoft Office accessible through a web browser.

In the business world, companies are increasingly turning to the cloud rather than local network storage. There are three main services implemented by businesses in their use of the cloud. ‘Software as a Service’ (SaaS) sees businesses subscribe to applications accessed over the internet. ‘Platform as a Service’ (PaaS) allows businesses to create their own custom cloud-based software, which can then be accessed by all their employees. ‘Infrastructure as a Service’ (IaaS) is where large scale providers like Google and Amazon rent out their infrastructure for use by other companies.

As cloud computing grows in popularity among businesses, new career opportunities for those with the necessary skills continue to emerge. Positions available in the field of cloud computing cover a very broad range, from developers and architects to security professionals and data scientists.

Given its constantly evolving nature, working with cloud technology requires a continuous updating of your education. Vendor-specific training and certifications are offered by the majority of cloud providers, but acquiring vendor-neutral certifications will help you stand out from other applicants and make you more employable.

As cloud computing is still developing, many current positions are with companies still in the process of defining their relationship with the cloud, whether accessing SaaS, PaaS or IaaS services, or building their own cloud from scratch. Cloud architects require specific knowledge of cloud computing technology and providers, and they must possess the ability to mould clouds to fit the needs of a business. Candidates for such roles should have enterprise architecture and/or service-oriented architecture experience, along with a base knowledge of cloud computing technology.

Despite all its benefits, there are still concerns regarding the safety of cloud computing. As a result, it has become the key area for those seeking a career in IT security. Businesses are now seeking professionals who can help them manage and lower the risks involved in moving to the cloud. Security audit services are in high demand, and applicants for such positions should hone their skills to focus on understanding the risks involved in cloud computing.

Along with the obvious technical skills, interpersonal skills are also required. As cloud computing is still so new, IT professionals working in the field will often find their knowledge level greatly outweighs that of their employer, so good communication skills are vital. The ability to advise your employer on the direction they should take their business in a language they will understand, and make them feel comfortable with your choices, is essential.

Vendor-specific training and certifications are offered by the majority of cloud providers, but acquiring vendor-neutral certifications will help you stand out from other applicants and make you more employable.
Your technology career planner 2019–2020

Non-finalists

• Apply for summer internships or placements for 2019. While some employers refuse to take students before their penultimate year, that’s not always the case. Deadlines for applications can sometimes end before Christmas, and many recruiters won’t wait until the closing date to start filling places.
• Develop valuable transferrable skills by helping to run a club or society at your university.

Final-year students

Meet top technology employers at gradireland’s specialist Discover IT careers event. Register for this invite-only event from October to January. The event itself takes place on 30 October 2019. Visit gradireland.com/events for more details.

• Apply for graduate jobs and schemes. While some have application deadlines before Christmas, others will have already filled many of their graduate scheme places by then, regardless of the stated closing date.
• Applying in the autumn term is ideal if you wish to pursue postgraduate study. Popular courses fill their places quickly and some universities require you to accept a place before you can apply for funding. Deadlines for funding vary greatly and it can prove financially costly if you miss them.
Winter

- Apply for any remaining internships or placement years.
- If you fail to find an internship, look into other options for the summer, like gaining technology-related experience through a temp job in IT support or shadowing an IT professional. Any role should help to develop your transferrable skills.

Spring

- If you have a choice as to your modules or projects for the next academic year, find out which options are most related to the work of the employers that interest you. If the necessary information isn’t available on the company’s website, phone its recruitment team.
- For a foreign holiday this summer, consider independent travel rather than a package holiday. This will help develop your planning and problem-solving skills, which will impress employers and will prove more likely to provide experiences you can mention in a job interview than an 18–35 package.

Summer

- If you’re involved in an internship, job or voluntary role, keep a record of the tasks you perform, whom you work with, any improvements you implement and challenges you overcome. This will give you essential experiences to draw on in applications and interviews.
- If you fail to land a job, spend the summer working on an IT project of your own making, like designing and developing a website, app or database that might be of use to you or your family or friends.
- Research the IT companies that interest you most to ensure you are prepared to apply for internships or graduate jobs in the autumn.

Winter

- Continue applying for graduate schemes. Some will accept applications into the new year or have ‘open’ deadlines, though they will close once they have filled the places.
- Make any remaining applications for postgraduate study or funding.
- Prepare for interviews and assessment centres, and factor in time for both alongside your university work. Have a respectable outfit ready for any interviews.

Spring

- Focus on getting through your exams, and take a break from job-hunting if necessary. The better your qualifications, the more jobs will ultimately be open to you.

Summer

- Keep an eye out for immediate vacancies with small employers that don’t run graduate schemes.
- Look for graduate internships on gradireland.com.
- Be aware that some graduate schemes may still have a place available for the autumn due to companies struggling to recruit or graduates dropping out at the last minute.
- If you have a job, give yourself a decent break but be prepared for work so as to make a great first impression.
COMPREHENSIVE CAREERS ADVICE AND JOBS FOR ALL SECTORS

Register at gradireland.com

BRIGHT CAREERS BETTER FUTURES
Tech sector interviews

IT employers use interviews to assess your technical abilities, but usually their aim isn’t just to evaluate how much knowledge you have amassed in one specific area. Employers are also interested in your ability to deal with unfamiliar technical issues and acquire new skills quickly.

Types of test you should expect
Employers may assess you with practical tests, presentations, design exercises, technical questions, or a combination of all of the above. To assess your problem-solving skills, you may be asked to comment on a range of scenarios or hypothetical situations of increasing complexity. Before the interview begins, you may be required to take part in a short design exercise or code analysis activity. You will then be asked to present your solution and explain your findings, and interviewers may ask you how or why you might revise the system or code if given more time. This may even happen prior to the interview itself, in the form of online tests as the first stage of the selection process or a presentation given to a group at an assessment centre.

Getting to grips with unique problems
In the workplace, you’ll often be asked questions to which no textbook answer exists – eg ‘How can we make this process run faster?’ You may also be required to come up to speed with new technologies in a short space of time, often without any formal training course. Recruiters will often challenge candidates with problems they’re unlikely to have come across before. Rather than panicking and thinking you’re expected to know the answer, keep calm and simply give it your best shot. Show the interviewer how you might approach finding a solution, even if you don’t have the solution. Before sharing your ideas, ask the interviewer if you need further information to complete a task, rather than jumping straight in and going off topic. Be honest if you don’t know the answer to a question, as the interviewer will see through your attempts to fabricate an answer. Remember, how you solve the problem is being evaluated just as much as your final answer.

Focus on your preparation
Make sure you fully understand exactly what it is the employer does, and review the job description carefully. Brush up on the relevant skills for the role and the technical activities of the organisation. While you won’t be required to possess in depth knowledge of all the company’s areas of expertise, it’s likely some of the questions you face will relate to these.

Be prepared to answer questions on anything you add to your CV. If you’ve engaged in project work, expect to be pressed on what it entailed, as recruiters use this as a way to assess how you may have tackled problems. When discussing your project in an interview, briefly explain the key objectives of the work and focus on the skills and techniques you employed, and mention how you overcame any difficulties that arose. If it was a group project, explain what your specific role was and how you integrated your skills into the group.

You may be asked what you do for fun. While you can tailor your answer to suit the role you’re being interviewed for, be honest or you could easily be caught out. Simply smile and share what you enjoy doing.

Don’t be passive
Most interviewers will stick to a set interview format and ask their questions in a specific order. While you shouldn’t attempt to hijack the interview and disrupt their method, neither should you remain passive. Sell your skills and experience in a clear manner while remaining within the framework of the interview.

Make sure you communicate the relevant experience and attributes you possess. If you aren’t asked about them directly, include them in your responses to other questions. Don’t assume the interviewer is aware of your achievements as they may not be the same person that screened your application.

If asked about your weaknesses, don’t attempt to disguise a strength as a weakness (eg ‘I’m too much of a perfectionist’); rather be honest and display how you might work to overcome any weaknesses.

Interviewers will often conclude the interview by asking if you have anything to add; take advantage of this and raise any key points you didn’t get a chance to mention.

Be polite and friendly
Viewing your interviewers as normal people will relax you and help you come off in a more natural manner. Making some polite but genuine small talk will help you stand out as a thoughtful and mature candidate, one who can interact with others in a business context.
Top employers in Technology

Every year, we carry out a survey of students to decide the most popular graduate employers in the country. The Trendence Graduate Barometer is the largest annual career survey in Ireland and the votes decide the winners of the gradireland Graduate Recruitment Awards and the composition of Ireland’s 100 leading graduate employers. Here are the winners and shortlist for Technology.

1. Google
2. Apple
3. Microsoft
4. Facebook
5. IBM
6. Workday
7. LinkedIn
8. Dell EMC
9. SAP
10. Ericsson

Make yourself heard
Vote for your favourite employer at www.trendence.co.uk/graduatestudyireland between September and early January.
Training and career development: how a technology career may develop

It now plays an integral part in every business and organisation and there are any number of ways a career in the industry might evolve. Nowadays, you don’t necessarily need to be a computer science graduate to carve out a successful career. Recruiters employ graduates from the entire spectrum of degree disciplines who can demonstrate a serious interest in technology, with many recruiters preferring to hire graduates with previous work experience (not always within the IT sector).

On the other hand, there are also more traditional ways into the field. A computer science graduate might start out as a programmer, software developer, systems analyst or web developer. With a few years’ experience, however, these roles can develop in a number of different directions. Some might find themselves moving into contracting or consultancy (the flexibility of these roles certainly suits some people); others might use their people skills and organisational ability to move into a training role; while still more pursue increasing specialisation and expertise (ideally becoming totally indispensable in the process!).

Career diversity
In general, there’s a rich diversity of career paths open to graduates in the high-tech industry. The technology is ever-changing, which means that so too are the job prospects. Constant on-the-job learning is, of course, crucial, as is a wider general awareness of the field (ideally this desire to learn will be motivated by a genuine interest in the job). By keeping abreast of, and becoming expert in, new technologies, professionals can find their careers developing in ways they never predicted when they first dipped their toe in the IT waters. The variety isn’t just in the nature of the technology. The sheer range of potential workplaces, from huge international corporations to small flexible NGOs, means that skilled professionals have a certain amount of mobility and a good chance of finding an environment where they feel happy and comfortable.
Discover IT is an innovative event which brings the best and brightest tech students together with top tech employers.

gradireland.com/events
Postgraduate study

Technology recruiters are crying out for qualified graduates, so a good postgraduate qualification could kick-start your career.

How postgraduate study or professional qualifications can help
Over half of all permits issued in Ireland are for those working in the IT sector. This is because, according to most colleges and employers, not enough Irish students are graduating with computer science and maths degrees, and there are a lower number of PhD students here than many other western economies. This puts highly qualified graduates in a very good position.

47% of employers say that they are struggling to hire graduates with the right IT skills (either basic IT skills and more advanced computer programming skills) and IT companies make up the third largest group of graduate recruiters (18.4 percent). Remember IT is one of the easiest fields to convert to. One-year courses are the normal route in, such as the Higher Diploma in Applied Science (Applied Computing Technology) offered by University College Cork, the Higher Diploma in Information Technology at the Maynooth University, or the Graduate Diploma in Information Technology at Dublin City University.

Pure conversion courses, such as DCU’s Diploma in Information Technology, are designed specifically to fast-track graduates from other disciplines into an IT career.

For unemployed people in receipt of social welfare payments, many postgraduate courses in ICT are currently offered free of charge as part of the government’s Springboard initiative. Participants also get to keep their social welfare payments. Preference for acceptance to a course is given to the long term unemployed, though all people receiving Jobseeker’s Allowance or Jobseeker’s Benefit are eligible.

Multidisciplinary postgraduate programmes, such as University College Cork’s MSc in Bioinformatics, have also become very popular, reflecting the convergence of formerly distinct fields such as pharmaceuticals and ICT in recent years.

Professional bodies, such as BCS, The Chartered Institute for IT in the UK and Northern Ireland, also offer industry-accredited courses such as the Professional Graduate Diploma in IT.

Professional bodies and trade associations
• ICT Ireland www.ictireland.ie
• BCS, The Chartered Institute for IT www.bcs.org
• Institution of Engineering and Technology www.theiet.org
• Irish Software Association www.software.ie
• Irish Computer Society www.ics.ie
• InvestNI (ICT and electronics)
• Science Foundation Ireland www.sfi.ie.

Further study and courses
Check out gradireland.com/further-study for a searchable database of computing and IT courses in Ireland and Northern Ireland.

Visit Springboardcourses.ie for information about that initiative.
Conversion courses in technology

Conversion courses offer graduates the opportunity to change direction from their undergraduate studies to focus on a new area entirely. Such a degree can be a great springboard to a more vocational or specialised area.

Conversion courses are typically one-year taught courses and are available in most subject areas, but there is often a particular focus on technology, with most of the major third level institutions offering conversion courses in some area of technology.

Conversion courses can be taken as the first step towards a postgraduate degree or standalone qualifications, and they are highly valued by employers. If you feel you didn’t reach full potential at undergraduate level, a conversion course can offer a chance to redress the balance.

Given the high rate of graduate employment in the area, it’s not surprising that many graduates consider a conversion programme in Information Technology.

Courses typically last for one year and offer a solid grounding in the theory and practice of computer science.

Many colleges offer cross-departmental programmes such as the Higher Diploma in Applied Science (Applied Computing Technology) at University College Cork and the Higher Diploma in Information Technology at the National University of Ireland, Maynooth.

Students who wish to move into IT in a particular subsector of the industry may wish to explore UCD’s Taught Masters Programme in Computer Science by Negotiated Learning.

This flexible and innovative programme helps students to customise their learning to their individual student needs and their prior learning experiences.

As well as data science, cloud computing, software engineering, forensics and security, artificial intelligence and cognitive science, students can choose a range of tailored modules to aid their specialisation such as app design, data mining, recommender systems or computer graphics.

DCU runs a very successful Graduate Diploma in IT, which is a one-year conversion course.

The entry requirement is a 2.1 degree in any discipline and the course attracts people from all walks of life.

A postgraduate conversion course in IT can fast-track you on to a master’s, such as UCC’s MSc in Interactive Media, Trinity College Dublin’s MSc in Computer Science, or an MSc in Data Analytics at Dublin Institute of Technology.

For employers, they accept that conversion courses provide an alternative pipeline of much needed talent, but some would still view a graduate coming from a four-year degree in the same discipline as someone coming from a one year conversion course. Also, it is worth remembering that when employers talk about skills shortages in IT, they are not talking about all areas of IT, so do your research about what skills are particularly in demand (programming and development in particular) and choose a conversion course that focuses on these areas, or at least incorporates significant elements of these areas.

Visit gradireland.com/further-study to find a conversion course that suits you.

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I love the fact that I’m always learning something new

Anam Ali
Job Consultant Developer
Employer Guidewire
Education BSc, Business Computing (Technological University Dublin, 2018)

What is your current job and what does it involve?
I’m a consultant developer with Guidewire Software. My day to day role requires me to look at customer requirements and then determine how I can develop solutions for them, working alongside developers, to meet the customers’ needs.

How did you acquire your current position?
I studied a bachelor’s in Business Computing at DIT and in my third year I interviewed for a six month internship with Guidewire. The very next day I received an email saying I had gotten the position, which was great. It was a six months rotational internship, and I worked in two departments – product development and professional services. I acquired many new skills, including technical coding skills such as Angular JS and GoSu, which is Guidewire’s own coding language. After completing the internship I was fortunate enough to be offered a graduate position with the company.

What do you like most about your job?
I love the fact that I’m always learning something new. I’m always creating something new, and as I’m a creative person, that’s something that really resonates with me. I’m also surrounded by a great, smart group of people at Guidewire, so there isn’t a day that I am not learning something new.

What are the most important skills for a career in this sector?
It is essential to have good technical skills, as they will make it much easier to integrate into the company. Two other skills which I would consider really useful are good communication skills and time management skills. As we have a diverse office, communication skills are vital, and you need to be comfortable working with different people across different teams. Time management skills are also hugely important as we have many deadlines and we need to ensure that we prioritise our work properly.

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Watch Anam’s interview at gradireland.com/get-started-fyi/technology/anam-ali-consultant-developer-guidewire and check out almost 200 others at gradireland.com/get-started-fyi
We understand the importance of the work

James Fitzpatrick
Job Machine Learning Engineer
Employer Axial3D
Education Bachelor’s, Theoretical Physics (Trinity College Dublin, 2017)

What are the tasks required for you to perform in your current position? As a Machine Learning Engineer with Axial3D, my job is a cross between a researcher and a software engineer. I have to perform the software engineer role while also playing the role of researcher.

The core of my work comes down to giving the algorithm a bunch of images and a set of examples. These images might be images of a medical scan. We might want to ask our algorithm to identify something in the scan by giving it a bunch of examples of what we want it to see and what we want it to give us. We can eventually train it to do something that humans can do very well but computers can’t, but we can get that computer to do it very quickly.

One of the things that I spend a lot of my time doing is producing high quality code, or at least what I consider to be high quality code. A lot of the work that we do for our algorithms comes from papers which might have been published two or three months beforehand or possibly even more recently than that. It’s quite exciting to be part of that. I’ve also gotten the chance to contribute to that as well and also talk to some of the people who’ve been working in that field, both the experts and people who are fresh to it, like I am.

How did you get your current job? I received an email with a job offer in the field of AI, which was what I really wanted to do. I had no idea what the InterTradeIreland Fusion programme was, and I applied through its website, which was the same as many of the websites that I’d seen before. I found out that not only do I get to do this job but I also get the opportunity to work with an academic supervisor in UCD, and as part of that I get to do a business management course in Queens University as well.

What’s your favourite part of your job? I spend quite a lot of my time sitting behind a screen reading papers. Once I develop an understanding and produce results from my experiments, I then share those results. This gives me a chance to not only tell everybody why my results are the way they are and why they’re important, but also to mentor other people and make them understand that their work is also important. Eventually we have a company-wide appreciation of how important the work we do really is.

What skills should students develop for a career in this sector? There are a couple of key skills that interact with one another for various reasons. The ability to communicate, to think abstractly and to break your problems into smaller tasks is fundamental. As part of a team, you’re never going to conduct software development or machine learning research independently, and if you do you’re not going to get very far.

As a student, I spent a lot of my time outside of college participating in things like Kaggle competitions. This gave me a chance to get to grips with the sort of messy data that I could perform machine learning on, along with the opportunity to develop my programming skills, which I might not have had much of a chance to develop as part of my formal curriculum.
A–Z of employers

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Factfinder

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Remember to quote gradireland Technology on your job application
And for further help with searching for jobs, go to: gradireland.com/career-sectors/it-and-telecoms
Baillie Gifford is an independent global investment management partnership, based in Edinburgh. In this fast-moving and ever-changing business landscape, cutting-edge information systems underpin everything we do. So, as you'd expect, we're constantly investing in the development of our systems and infrastructure. Just as important though, is our continual investment in the development of our people: the 300-strong team of IT professionals who bring that technology to life.

As an independent business that’s owned by its partners, the culture here is different. It’s a business where people matter. Where your personal and professional fulfillment matters. Where your work-life balance matters. Where you matter.

Application Development Graduate Programme
The Application Development programme at Baillie Gifford is all about working with technology and people across the business to create new and imaginative solutions. You’ll work with users to define and create systems with a wealth of different technologies, including HTML5, Javascript, Angular, ASP.NET Core, Oracle SQL, PL/SQL, and C#.

Your first three months of initial training gives you the technical skills you need to become a full stack developer. You’ll be given training to work on front end and back end projects, as well as database training, language courses and web development courses, which will all be tailored to your existing skill level.

To apply, you’ll need a 2.1 degree in any subject. We’re also looking for knowledge of one programming language and a proven interest in software development.

Technical Infrastructure Graduate Programme
As a member of Technical Infrastructure team, you’ll focus on exploring how emerging technologies can shape the future of our business. You’ll receive two years of hands-on training, where you’ll have the opportunity to rotate around different teams in the department. In terms of vendors, you’ll get the chance to work with products from companies like Microsoft, VMware, Dell EMC, Cisco, Apple, Palo Alto, Splunk and Bloomberg. We also work with cloud technologies including Office 365, Azure and Amazon.

Join us and you’ll have the opportunity to make an impact on these technologies, whether it’s through partnering with major tech companies to source and implement business solutions or testing new products that are not yet on the market. We need people who are open and willing to learn new things, as well as build on their existing skills and expertise. We’re also looking for a 2.1 in an IT related degree.

Internships
Our Technical Infrastructure 12–15 Month Placement and Application Development Summer Placement offer the chance to get involved in real business projects and experience our technology first hand.
Are you an ambitious and enthusiastic graduate hoping to launch an exciting career?

Then join our technology transformation and put yourself at the centre of the action in the company voted Ireland’s Number 1 Graduate Employer in Banking/Financial Services.

Bank of Ireland is on a journey of innovation, driven by our people and our customers. We have a variety of Programmes on offer, which will enable you to make a significant difference to one of the Bank’s largest projects to date.

Our IT Division is responsible for managing the strategic IT landscape across all businesses within Bank of Ireland, enabling and improving the customer experience through technology. Similarly, our Data Analytics strategy is focused on agile, data-driven decision making to enable a digital future.

The Opportunity
Within the IT Programme, you will complete 3 rotations over 2 years, providing you experience with one of the main business areas that we support, in order to gain an invaluable insight and understanding of key business drivers and priorities. On the Data &Analytics Programme, you will gain hands-on experience in 1 of 3 particular areas: Data Science, Data Visualisation and Data Engineering over an 18 month programme.

What you can expect in return
Each of these Programmes offers you first hand practical experience in supporting all of our businesses and customers alike. In the world of IT this includes Robotics, Infrastructure Design and Banking Platform Transformation. In regards to Data Analytics, key areas for training will include technical (SQL, SAS, Tableau, Axon, Teradata, Python), ways of working (Agile, Design Thinking, data management) and general management (communication, critical thinking, collaboration).

- **Diverse Experience** - Experience different responsibilities in various parts of the business
- **Responsibility** – Work in roles with real responsibility which will enable you to grow personally and professionally.
- **Development & Learning** – Combine work experience with mentorship, class study and the opportunity to pursue professional qualifications that will equip you with the knowledge and expertise to fully realise your talent and potential.

Securing a place on one of our Programmes will give you the opportunity to be part of our digital transformation, and work with industry experts on projects that will make a real difference for our customers and the future of banking in Ireland.

Meet a Graduate

Stephen Carroll, BA Hons Business Information Systems, Cork Institute of Technology

“My previous rotation was in IT Vendor Management. In my current role, I am working on a project to automate and digitalise processes that are currently done manually. I have the opportunity to train under some highly experienced people who have a wide knowledge of the industry. The community of fellow and past graduates in BOI is amazing. Myself and fellow graduates have constant communication between each. Also, the other employees are more than helpful if you have any questions. Since joining the Programme, my confidence has grown immensely and I now regularly chair meetings with senior management.”
BD is a leading global medical technology company with more than 65,000 employees worldwide. Since 1964, BD has invested significantly in creating Irish jobs and now employs more than 1,300 highly skilled workers in Drogheda, Dun Laoghaire, Enniscorthy and Limerick.

BD Research Centre Ireland
Building on this long history of success in Ireland, BD established Research Centre Ireland (RCI) Limerick in February 2017 as a global research & development hub located in Castletroy, Limerick. RCI is a new state-of-the-art facility adjacent to the beautiful University of Limerick campus.

We develop innovative technologies to improve biomedical discovery, clinical diagnosis of disease, and the delivery of care for patients and health care workers. We currently employ 200 experts in software development, software testing, systems engineering, mechanical and electronic engineering, project management, quality and biosciences, including immunology. Our diverse, collaborative workforce brings together people from 27 countries working in multidisciplinary teams to solve problems and advance the world of health.

Who are we looking for?
At RCI, we are looking for candidates who have the intellectual, analytical and creative ability to learn quickly, identify issues and propose new solutions. As part of our team, you will be at the forefront of creating and developing specialised devices, software solutions and systems to help others.

Name: Christian Malone
Position: Software Engineer
University: UL
Date Starting: Sept 2017 after completing BSc in Computer Game Development

‘I heard about BD’s graduate programme from a lecturer and decided to apply as I felt it would give me great industry experience as I began my career. I was attracted to the fact that BD looks after their employees and that they were willing to invest in students. Through this programme I have gained new skills across a range of software development tools and languages. I have also made valuable connections, and worked with some very talented developers. I feel that this opportunity has expanded my knowledge and will increase my employability in the future. What is great about the programme is that graduates receive the support they need. BD don’t expect you to know everything right from the start – I am still learning new coding languages and familiarising myself with the codebase but as I gain more experience, I am given more work and more responsibilities. I would have no hesitation to recommend BD to graduates.’
The Career Boost programme connects you to a real job with real support in either the Science, Engineering or Technology field in an innovative SME. Jobs can be based anywhere on the island of Ireland, you decide where you would like to work.

The job roles vary, but you will really matter to that business. The focus is on supporting the main management team to create and develop technologically innovative and commercially viable products and services.

Career Boost gives you a unique opportunity to step into a project manager’s role early on in your career, with the comfort of academic support throughout. The positions are for either twelve or eighteen months with 80% of graduates being offered full time positions within the company whilst others used their experience to progress in their career. It doesn’t matter what time of year you are reading this; we are always on the lookout for good project managers!

All jobs advertised have different criteria however, you must have a qualification which matches the criteria of the position being advertised. For some roles, relevant previous experience in the industry can be an advantage.

**How does it meet your future training needs?**
You will have the opportunity to study part-time a fully funded Postgraduate Diploma in Business & Management, Queens University, Belfast.

The unique diploma will enhance your personal, professional and managerial capabilities and will provide you with the necessary and valuable business skills that will help support you as you undertake your project role.

A training budget of £1,500/€2,000 is also available. This can be used for attending events, courses, further management training or to pursue other technical qualifications related to your job role.

**How do we support you?**
All positions are salaried reflecting the responsibility of the role. These posts benefit from mentoring and support by leading academics from relevant universities/colleges on the island. Your academic mentor is there to help and support you throughout the twelve/eighteen months with advice, technical information and support, use of lab facilities – whatever is needed to help you achieve your goals.

**What next?**
If you want to gain confidence to think independently, benefit from specialist support, showcase your entrepreneurial flair, create new opportunities and boost your career today, visit intertradeireland.com/career-boost to view all current vacancies or to register your interest in the programme.
Co-Innovate Programme

Each year we support businesses from the eligible regions to actively recruit up to 40 Project Associates from within Renewables, Life and Health Sciences, Agri-Food & Tech, ICT, Manufacturing and Tradable Services disciplines.

The EU INTERREG VA funded Co-Innovate Programme will facilitate 80 cross border research and innovation linkages between SME and Higher Education Institutes. Each of these academic and business partnerships will identify a unique innovative project that will be specific to the SMEs needs.

The job roles vary from business to business; but the focus is on supporting the main management team to create and develop technologically innovative and commercially viable products and services. The job roles are for a twelve-month period and it is anticipated that the company will provide opportunities for progression to enhance your career development.

Another advantage of the EU’s Co-Innovate Programme is that no matter what time of year you are reading this, we are always on the lookout for good Project Managers.

All jobs advertised have different criteria however you must have a qualification which matches the criteria of the position being advertised. If you have relevant previous experience in the industry that can also be an advantage.

What’s in it for YOU
• Salary up to €40,000 co-funded up to 50% by Co-Innovate Programme.
• Opportunity to work as Project Manager reporting directly to the Senior Management Team within the company.
• Exposure to all departments of an SME and receive a holistic overview of the company.
• On completion of the successful project it is envisaged that there may be opportunities for full time employment within the company.

Academic Support
All our Project Managers get at least two days per month support to include mentoring, coaching and overall guidance on project delivery from a leading relevant university or college. The academic mentor is there to help and support you throughout the twelve months, providing advice and guidance, access to research papers and use of facilities.

Next Steps
If you want to gain the confidence to think independently, showcase your entrepreneurial flair, create new opportunities and develop your career then visit www.co-innovateprogramme.eu/jobopportunities to view current vacancies or to register your interest.

This project has been supported by the EU’s INTERREG VA programme, managed by the special EU programmes body (SEUPB). Match-funding for the project has also been provided by the Department for the Economy in Northern Ireland and the Department for Business, Enterprise and Innovation in Ireland.

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Jobs
Type of work
• construction • engineering
• environment • IT • manufacturing
• medical • science
Salary Up to €40,000 p.a.

Locations
Six Border Counties of ROI - Donegal, Sligo, Leitrim, Cavan, Monaghan and Louth.
Northern Ireland and Western Scotland including the Highlands and Islands (Dumfries & Galloway, East Ayrshire and North Ayrshire mainland; South Ayrshire; Lochaber, Skye & Lochalsh, Arran & Cumbrae and Argyll & Bute and Eilean Siar/ Western Isles).

Apply
• online
Application form via our website
www.co-innovateprogramme.eu
Discover IT is an innovative event which brings the best and brightest tech students together with top tech employers.

gradireland.com/events
At Deloitte, it’s our people who make us succeed. Your background, skills, interests and ideas are what makes you succeed. We value you and everything you can bring to our business. Come and build your career with us.

Business relies on Technology which is why it plays the most vital role in ours. We have a dedicated team of experts working across all our service areas including Tax, Audit & Advisory, Consulting, Corporate Finance and Risk Advisory with the purpose to innovate for a better business.

Our strength consistently lies in the fact that we recruit people who look at complex issues through a different lens. The rise of our Technology Consulting, Cyber Security and Data Insight service offerings and the disruption of our Audit, Advisory and Tax services have created huge opportunities for rewarding careers within our firm. We are looking for graduates with capabilities in active learning, critical thinking, complex and creative problem-solving, all of which correlate closely with engineering graduate skills.

Deloitte is the largest professional services firm globally, with a network of 263,900 people in 150 locations, and almost 3,000 in Ireland. We have a dedicated team of experts working across five service areas: Tax, Audit & Assurance, Consulting, Corporate Finance and Risk Advisory with the purpose to innovate for a better business.

Building a career at Deloitte builds your future as a professional and gives you the opportunity to work with some of the biggest companies not only in Ireland but across the globe. We believe that the work we do, from our partners to our interns makes an impact on our clients, our people and society from Limerick to London, Belfast to Boston or Dublin to Düsseldorf.
What did you study in college?
‘I studied Masters in Electronics and Computers Engineering in UCD.’

Why did you choose the Deloitte Graduate Programme?
‘I chose Deloitte graduate program because it is a perfect mix of technical and non-technical trainings, social activities and rich culture. At one of the Deloitte graduate events, I got the opportunity to meet some of the Deloitte team, who were very open about the culture in Deloitte, work-life balance initiatives, my learning journey, social and sports clubs that one can join etc., which made me confident in choosing the right step in my early career. I knew immediately that this is the right company for me. I came to know the real assets for Deloitte is its people and community.’

What did you find most challenging about the working world?
‘I love challenges, so I take challenges in a positive manner and by overcoming them, it makes me feel stronger and confident in every step. Working with different people, with different mind-sets is another challenge that comes up quite often in the consulting world but Deloitte has various structured learning programs which helps us to understand our colleagues and clients ways of working and how to adapt our styles accordingly.’

How has Deloitte helped you build your career?
‘Deloitte has helped me build my career by giving me the right opportunities to learn and grow in each phase of my career journey. I had my own learning pathway, mandatory trainings, eLearning’s and personal trainings that I can take throughout the year. My team ensure that I had the right amount of time to complete these trainings even if you are working on a very busy client project. I have learned throughout my graduate programme that both personal and professional growth of an individual is of utmost important to Deloitte.’

Do you have any mentors and if so what is their value to you?
‘Each and every person I met in my team has in some way motivated me and helped me in growing my skills. Their value is incomparable in my life. I really value their advice and cannot thank them enough in there help towards progressing my career.’

What is the most valuable thing you have learned since you joined the workforce?
‘The most important thing I have learned since joining the workforce is that we always have to keep a positive spirit in whatever work we do. Also, Respect and integrity plays an important part when working in a team both internal and external to Deloitte. Furthermore, I have learned to ask as many questions as you want, as no question is a silly question.’

What’s the one thing you wish you knew when you finished college?
‘I wish I knew how awesome my job would be. I thought it would be a regular job with the same work done each day. But now I can say I was totally wrong, as my job includes work that is different each day, includes travel to various countries, social and sports events etc. All this makes me happy and satisfied by my choice of company after finishing college.’
Ericsson Ireland

About us
For as long as Ericsson has existed, we have had the idea to make communications available for all. For more than 140 years, our ideas, technology and people have changed the world: real turning points that have transformed lives, industries and society.

Mobility is the fastest scaling technology ever. Today, there are almost 8 billion mobile subscriptions globally, enabling people around the world to communicate. Our industry is a key driver of innovation, economic growth and human equality — one of the few industries that touches almost all people in the world, daily. It is also a very competitive industry. Our customers, the communications service providers, are looking to technology to help them tap into new revenue streams, go fully digital and continuously be more efficient in response to skyrocketing traffic on their networks.

The advent of 5G and IoT and real-time connectivity – from connected cars to personal wearables to smart grid technology – will again change our world. It will pull us into an age of advanced machine intelligence, blended virtual and physical realities, and complete network connectivity. We are at the forefront of this change focusing on network quality and an evolution path to 5G.

We are setting both 4G and 5G speed records, leading in network slicing and distributed cloud and reducing complexity with innovative Artificial Intelligence and machine learning solutions. Our commitment to developing leading technology is underlined by the more than 42,000 patents we have worldwide, including our landmark 5G patent application that was the largest ever in our industry on terms of inventors.

Apply to find out more on www.ericsson.com/careers.

What We Offer You
• We offer graduate opportunities in Software Development, R&D, Network Engineering and Integration Engineering. You can work for the global leader in telecoms networks using the most up to date and cutting-edge technologies as well as continuous training and development throughout all stages of your career. Build a career in a challenging yet supportive environment which fosters initiative and personal growth.
• Diversity & inclusion: Our diversity and inclusion bring us closer together and helps us make a difference. We sponsor several initiatives globally and foster internal initiatives such as our Women’s Network and Ericsson GLOBE (our LGBTQ network).
• Innovation: We are leading the digital revolution and have the industry’s strongest patent portfolio. If you have an idea, big or small, you can bring it to our Innovation Den and discuss it with our senior consultants and leadership team.
• We Support, You Learn: As well as a mentor, you will have access to an extensive scholar program to support you in your continuous learning.
• Our career paths are well established; initiative and hard work are recognised and very quickly rewarded.
ESB is Ireland’s foremost energy company. We have been supplying power to industry, communities and individuals for over 90 years. Our mission is to bring sustainable and competitive energy solutions to all customers and communities we serve by leading the transition to reliable, affordable, low-carbon energy.

Working at ESB
ESB has a highly trained and committed workforce of more than 7,000 people operating across our diverse and innovative business units. We value each member of our team and we are very proud of our culture of collaboration, innovation and teamwork.

We pride ourselves on our commitment to creating and promoting a positive and inclusive work environment that fosters collaboration and creativity, where all employees feel that their contribution is recognised and valued.

ESB Graduate Development Programme
The objective of our Graduate Programme is to launch you on a fast track to career success. A career with ESB will allow you to shape your future career through challenging and rewarding work enhanced by continuous learning and development.

We have developed our Graduate Development Programme based on the following pillars:
• structured rotations
• challenging assignments
• a supportive Graduate Network
• competitive salary and benefits package
• robust learning and development
• experience working on a wide range of major projects
• exposure to different areas of our business
• a dedicated mentor who will guide you on your career journey

At ESB, your graduate life is about more than just a Graduate Programme. Whichever part of the business you work in, we want you to enjoy being part of our community. We organise regular sports and social activities including sponsored runs, tag rugby, summer barbeque, 5-a-side World Cup and Cross Company Power Challenge.

We have a strong culture of giving back and Corporate Social Responsibility is an embedded part of our company and our culture. We allocate over €1m annually to support organisations working in the areas of suicide prevention, homelessness and educational disadvantage. We support local community groups and we encourage staff to take part in initiatives such as Time to Read and Time to Count schemes for local schools.

We have a number of opportunities for graduates to join our Graduate Development Programme, commencing in September 2020, across the following disciplines:
• Engineering – Electrical, Mechanical, Civil
• IT
• Business
• Finance
• Marketing
• Human Resources

Apply to the ESB Graduate Development Programme at:
www.esb.ie/careers/graduates

Contact
Sinead Moloney
Graduate Recruitment Lead
Email graduates@esb.ie
Web www.esb.ie/careers
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Jobs
Type of work
• Engineering • Utilities • Energy
• Renewables Sector
Salary Competitive salary and benefits package
Number of vacancies Up to 80
Degrees sought
• Engineering (Electrical, Mechanical, Civil, Energy Services) • IT • Marketing
• Business • HR • Accountancy • Finance • Economics

Locations
• Republic of Ireland • Northern Ireland • Great Britain • Rest of world

Apply
• Online: esb.ie/careers/graduatedevelopmentprogramme
Closing date 12pm on 25 October 2019
Everybody has a natural talent. At EY, we want to help you develop yours, naturally.

Are you into gaming? It takes inventiveness, creativity and quick thinking. Maybe you're mad about multi-player games. That takes leadership, bravery and imagination. What about strategy games? That's all about numeracy and logical reasoning. Whatever your natural talents, at EY we help you develop them naturally into a meaningful career where you can use them to excel.

Why IT graduates excel at EY

People in IT have to be original thinkers, with curious minds. They have to be problem-spotters and solution builders. That's why the natural talent that brought them to IT, is perfect for starting the EY Graduate Programme in Audit, Tax, Transactions, Advisory and even IT, Data Analytics & Cyber. We look for IT graduates to help us create a diverse workforce, with an array of skills and new ideas that can help us build a better working world.

Start your career journey with EY

We're looking to take your natural talent and develop it across one of our five graduate programmes:

- **Assurance (Audit)** — become a Chartered Accountant, providing solutions to help our clients make informed decisions that increase stakeholder confidence.
- **Advisory** — become an experienced Consultant, providing expert knowledge to advise on a broad range of issues across a variety of industries for companies looking to grow, change or improve performance.
- **Tax** — become a qualified Chartered Tax Advisor, predicting how tax will evolve and advising our clients on how best to react to those changes.
- **Transactions (Corporate Finance)** — become a Chartered Accountant, advising clients on when and how to buy, sell or merge companies in order to improve growth, competitiveness and profitability.
- **IT, Data Analytics & Cyber** — become an expert in your field, test-driving market-leading analytical software, taking part in knowledge-sharing sessions, working on client proposals, identifying gaps in the market and pitching exciting new solutions.

You'll join a firm that offers world-class coaching and career development. While there will be a certain focus on building your technical skillset, we also want you to gain the skills needed to manage your workload and create a healthy work/life balance.

The EY Graduate Programme is your career incubator, you’ll become one of the most employable young people in Europe. Quite simply, it’s the perfect foundation to develop your natural talents, naturally.

If you’d like to join Ireland’s most successful graduate employer (winning 10 gradireland awards in three years), we’d love to have you!

Whatever your talent, apply it at EY.
QUICK THINKER

EY Graduate Programme

NATURAL TALENT, DEVELOPED NATURALLY.

Whatever your talent, talk to us...
First Derivatives plc

First Derivatives is a global technology provider of high-performance, time series software to a variety of industries, as well as regulatory and IT consulting services to the Capital Markets industry. FD’s software platform, Kx technology, is the established market leader in the capture and analysis of real-time, high-volume, time series data. First Derivatives has become an internationally recognised partner to the world’s largest third-party trading and risk management providers in our Vendor practice also. The company is headquartered in Northern Ireland and has continued to expand its service offering and now has operational bases in the UK, Europe, North America, Asia and Australia to service its global client base. It is recognised as one of the fastest growing capital markets service providers in the world and now employs over 2,400 employees worldwide.

First Derivatives is currently hiring across three distinct Graduate Programmes: Options, Explorers and Futures.

**Options** has been developed for world class Graduates with an interest in Data Science, Trading Technology, Financial Engineering, and Software Engineering.

**Explorers** is designed for elite Graduates with a passion for global business development.

**Futures** is a graduate programme for graduates keen to live local in our Newry HQ on exciting global projects.

**Your graduate package:**
- Competitive salary plus graduate package, worth in excess of £60,000
- Accommodation packages
- Global travel opportunities
- Rapid career development

**Global Opportunities**
Are you a graduate from a STEM, finance, computer science, law, business or similar discipline? We have fantastic global roles within our Options programme for graduates straight out of university. This programme will fast-track your career in the big data and financial industry and afford you the rare opportunity to work as a Junior Consultant for some of the world’s most reputable Tier 1 Investment Banks in locations as diverse as Dublin, London, New York, Sydney, Singapore and Hong Kong, to name a few.

**Select your stream:**
- Financial Engineering
- Data Science
- Trading Technology
- Software Engineering

**Your graduate package**
What makes us different at FD is the competitive graduate package we provide. Our award-winning Capital Markets Training Programme combines theoretical learning with practical, on client-site experience, working in the fields of finance and technology. We also provide you with support to undertake professional accreditations.

**Other benefits include:**
- Work on client projects in Tier 1 Investment banks.
- Rapid career development.
- Competitive salary plus graduate package in excess of £60,000.
- Package includes a weekly food allowance, accommodation, utility bills and return flights home.
Financial Engineers:
Roisin Flynn
MSc Business and Management (Trinity College Dublin)

“I joined the January intake which consisted of 24 people from across the globe. After our period of training, I was offered the opportunity to be deployed on client site in Krakow. Had I been told a month prior I would be moving to Poland – I probably would have laughed. One of the best things about working with FD is you never know where you will be sent next! Having an appetite for travel and being open to the possibility to work anywhere will serve you well. I am now currently working for a Tier 1 bank based in New York City.”

Trading Techs:
Alejandro Lopez
MSc Financial Risk Management (Trinity College Dublin)

“During the first month, we had masterclasses every morning with multiple components of the different teams that they were working there for the different projects. They taught us the principal modules that Murex can offer in terms of Risk Control, from Risk Configuration to Risk Reporting. Furthermore, we had different exercises to work on during the afternoon to settle down the knowledge learned in the morning. Honestly, I can say that every day I learn something new which is really good for my future and at the same time allows me to live in one of the best cities to learn about the financial markets or in my case what I like the most financial risks. I am now currently working as a Risk Analyst for a huge client in London.”

Data Science:
Sarah Gibson
BSc Mathematics, Statistics, and Finance (University of Western Australia)

“Through FD, I have had the opportunity to work with very different clients across several cities! My role has allowed me to work in a support role for a major global bank as well as enjoy the experience and growth of working with a start-up. I have enjoyed my experience so far and am looking forward to the next project. My most recent project was working as Kx Developer for a 3D Imaging and Earth Observation Company.”
Want a career that gives you career progression in a fast-paced, innovative, cutting-edge technology business?

At Openet it’s our people that really matter and we work hard to ensure that they have jobs that challenge them and have a positive impact for our customers, as well as experiences that are both fun and varied.

Who we are?
Established in 1999, Openet has grown to become Ireland’s largest privately owned software company with our people located in 23 countries worldwide.

We enable global telecoms service providers to optimise their digital transformation and customer experience. Our customers include 7 out of the 10 largest telecom companies worldwide and we are proud to say that we deliver the most innovative and high performance telecom software for these businesses to grow and evolve.

Openet solutions process more than 20 billion events and transactions every day, and do this across more than 330 million subscribers for more than 75 service providers worldwide.

Did you know that 1 out of 10 global mobile transactions are enabled using Openet’s software solutions?!

What you can expect?
Based in Dublin, you will be exposed to working in a global, fast-paced, customer-led organisation. As a global company our employees have opportunities to work and travel internationally.

What we offer you!
• Competitive salary, sign-on bonus and excellent benefits package
• 15-week structured on-boarding programme involving rotations across the business
• Structured technical & professional development enabling you to be ‘job-ready’
• Opportunity to develop an understanding of Agile / Kanban methodologies
• Exposure to a fully operational DevOps / Microservices deployment organisation
• Develop cutting-edge software solutions that control and monetise entire global telecommunication networks – that are at scale and geographically distributed
• Utilise leading edge technologies and develop software in a fully CI/CD environment
• Opportunity to work on live projects alongside industry experienced colleagues
• A structured career path designed to help you realise your potential
• A mentor to guide you every step of the way
Openet's Graduate program has been a great kick-off for my career in technology. As a grad, it can be hard to figure out which path to take and how to develop the experience required by the industry. For many of us, it is also a time to understand ourselves as professionals so we can visualise the connection between what we know, what we love doing and what makes us feel fulfilled: our purpose.

Since joining Openet I have gotten to work on a lot of new and interesting projects with welcoming and talented engineers. I currently work in the UI department, providing the front end applications for our products. Grads are also invited to loads of different events as well, from college visits to company and department nights out. The social club is also well worth it!

I love working with highly experienced people who always have time to lend a hand and teach you something. At Openet a lot of effort is put into our personal and career development, from training courses and talks, to social events outside of work. And it’s extremely gratifying to know millions of blissfully unaware people every day use your hard work to make their lives easier.

Over the last few years I have worked in many areas within Openet, and have gotten to know some great people. The work is both challenging and rewarding, and I have grown a lot as a person. The graduate program acted as a great starting point in my career, and allowed me to further my own development as an engineer.

I was nervous when I first joined Openet. But the graduate program and the guidance from colleagues was excellent, and it kept pushing me to learn new things every day. By the end of the graduate program I was confident enough to face the real world challenges. Also, Openet let me choose where I wished to work. Now I work with the Customer Systems team. Every day is different.
Use your gradireland dashboard to make your job hunt easier

1 Your profile
Keep your profile up to date. This is your career passport so it’s in your best interests to complete it in as much depth as possible. We can then send you the most relevant careers advice and jobs information possible.

2 Shortlisted courses
Interested in postgraduate options? Save the courses you are interested in and revisit them at a later date.

3 Favourite content
Found an article or video useful? Save it here. We recommend saving useful content throughout your career journey – from choosing a career to the day you get hired by your favourite employer.

4 Your CV
Make your applications easy: save your CV to your dashboard.

5 Recently viewed
Jump straight back into advice, videos, internships, jobs and events you were recently exploring.

6 Shortlisted jobs
Save all the jobs you are interested in and get reminders when their closing dates are approaching.
Personalise your job search

Direct messages

You can now receive highly targeted messages from employers and have the opportunity to connect with them directly.

Employers send messages to specific students that they would like to talk to. This could be about a job opportunity you are a good match for or an event they would like you to attend.

We send you an alert to let you know there is a message waiting for you within your dashboard.

Once you’ve read the message, you decide whether or not you would like to continue to talk directly to the employer about the content of the message, i.e. to find out more about the company or role, or to attend the event.

If you would like to continue the conversation, we will send the employer your gradireland profile, including contact details but excluding sensitive data, so they can contact you directly.

Direct messages within gradireland are the best way to build your network and land your perfect graduate job!
Your graduate life is about more than just a place on a graduate programme. You want to build on your unique strengths and find your place in the world. We want you to think beyond what success means to you.

Our Consulting, Assurance and Tax practices provide a variety of technology-related services and expertise to our clients. We work with organisations to deliver technology-enabled business transformation journeys. When you join us, you will have the opportunity to work on high-profile projects in Technology Strategy, Technology Delivery, Digital, Computer Forensics, Data Analytics, Cybercrime, Electronic Discovery and Information Management.

Why should I choose PwC?

It’s a place to grow and make a difference
From the very start you’ll be working with clients, sharing your unique perspective and making a difference. The work you do will be as varied and interesting as the clients you’ll work with.

Our graduate programme is the ideal launchpad for your career. We offer continuous learning opportunities to accelerate your personal and professional growth. You can gain a professional qualification or take up an international secondment. When it comes to your development, the only limit is your desire to grow. We reward your progress with salary and grade progression.

As well as making a positive difference to your clients, you’ll also be able to take part in our various CSR initiatives and give back to the community.

It’s full of opportunities for people like me
No two career paths are the same at PwC. What defines them all is choice. You’ll get the opportunity to work in a variety of areas. If you want to improve your skills, if there’s a team you want to work on – all you have to do is ask.

You can build on your own unique strengths, or choose to stretch yourself in a completely new field. We want your individual talent to shine wherever you decide you can add the most value.

You’ll work with people from different backgrounds, with different skill-sets and expertise. Being yourself and lending your individuality to the mix is what will lead you – and us – to success.

It’s more than a place to work
PwC is much more than a good career move. We care about you, not just the job you do. Your life shouldn’t be on hold from Monday to Friday. We have social, health and well-being facilities and programmes available for everyone. We won’t lie to you, we expect you to work hard and meet your deadlines. During busy times, you might have to put in some extra hours. But in turn, we allow you to build up your overtime and use it to take time off.

You’ll be starting alongside over 300 other graduates. You’ll learn from each other as much as you’ll learn from us. And you’ll make life-long friends along the way.

What are our graduate opportunities?

We have graduate positions available in our Assurance, IT Assurance, Tax and Consulting departments. We choose the best people from a wide range of backgrounds and degree disciplines. You are eligible to apply if you are in line to achieve a minimum of a 2.1 degree.

Join the firm recognised as gradireland’s Best Graduate Specialist/Professional Training and Development Programme 2019, and find out why we’re number one.

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Graduate Recruitment Team
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facebook.com/pwcirelandcareers
youtube.com/pwcireland
linkedin.com/company/pwc-ireland
snapchat.com/add/pwc_ireland

Jobs
Type of work
• Consultancy • Cybersecurity
• Digital transformation • Data Analytics • Financial services IT
• Human resources IT • Internet and e-commerce • IT Strategy • Network engineering • Project management
• Software development • Systems/business analysis • Technical support

Salary
Competitive package worth over €32,000

Benefits
22 days annual leave, increasing with promotion • Flexible Friday – 3pm finish during the summer and bank holiday week-ends • Paid overtime or time off in lieu of overtime • Life assurance & PwC pension plan • 24 hour on-site gym & fitness classes • Holistic and beauty therapies • Subsidised healthcare insurance • Optional extra Christmas leave days • Wedding leave and gratuity • Paid maternity leave and new parent leave • Smarter travel options

Number of vacancies
Over 350

Degrees sought
We accept applications from all degree disciplines

Work experience
Yes

Duration
Flexible per individual requirements

Locations
• Republic of Ireland

Apply
Online

Closing date
Dependent on position
Options
Graduate Programme

Global travel opportunities working with world class clients.

Join the elite.

Select your stream-
- Financial Engineering
- Data Science
- Trading Technology
- Software Engineering

Rapid Career Development
Free Accommodation
Up to 3 Months Training
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For more information and to apply visit:
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