

# What are the different careers in IT?

Do you love working with computers? Are you excited by what the future of technology might bring? Perhaps a career in IT is right for you. The Australian tech sector has grown 80% in five years and is on track to offer more than a million jobs by 2030, making a career in information technology an exciting pathway.

IT jobs lists are packed full of opportunities for people with the relevant abilities. If you're considering a [career in IT](#) and wondering where your tech skills can take you, read on and explore the possibilities.

## Careers in IT development

Technological advancements are affecting virtually every industry you can think of. App development, AI technology and robotics are some growing areas in tech, while software development, cybersecurity and tech support positions are a few examples of IT roles that have been around for decades. Put simply, there are endless pathways you can take in an IT career.

Some of the most in-demand types of IT jobs include:

- Systems analyst
- Web developer
- Data scientist
- Database administrator
- User experience designer
- IT technician
- Computer programmer
- Software engineer
- Network engineer

Let's delve into what each of these roles are and the information technology careers they open up for you.

## **Systems analyst**

A [systems analyst](#) monitors and analyses system activity for vulnerabilities and opportunities for improvement. They will often work with users to explore modifications and features that make the system more efficient and easier to use. The role involves working with engineers and developers to test and improve software, and train users on new operating systems. Naturally, it's essential for a systems analyst to stay up-to-date with the latest technologies.

### **Qualifications needed to be a systems analyst**

A systems analyst will typically need an undergraduate or postgraduate degree in information technology (IT). Advanced degrees can also help you stand out when applying for jobs, particularly if you want to pursue a specialisation. You will need strong skills and abilities in:

- Knowledge of computer systems and coding
- Verbal and [written communication](#)
- Interpersonal skills
- Analytical and [problem-solving skills](#)
- Organisation skills

You may also need skills specific to certain jobs, or experience with certain software, coding languages and/or industries.

### **Career paths for systems analysts**

There are many different career paths a systems analyst can take, including:

- Applications analyst
- Computing systems consultant
- Data processing systems analyst
- Information systems analyst or planner
- Programmer analyst
- Quality assurance (QA) analyst

- Systems developer
- Systems architect

The more skills you accrue, the further you can progress in your career and increase your earning capacity.

## **Web developer**

A [web developer](#) designs, builds and maintains websites, applications and software. As a web developer, you are responsible for bringing website designs to life using different coding languages and platforms to integrate content, graphics, applications and more.

You may work on a freelance basis or for an agency, building and maintaining websites and apps for a range of different clients. Or you might work 'client-side' – in-house at a company, solely devoted to optimising and upkeeping its own website and platforms.

There are different areas of web development you can explore, including [front-end development](#) (working on the visual elements of the website), back-end development (working on the operations of the website) or [full-stack development](#) (a mixture of both front- and back-end).

### **Qualifications needed to be a web developer**

To become a developer, you will need a diploma or bachelor degree in information technology, specialising in web development. As part of your studies, you will learn coding languages like JavaScript and CSS, and other modules that cover how to build a website.

### **Career paths for a web developer**

Progressing your career in web development could look like advancing into leading or managing a team. Other careers in web development may include specialising in a particular industry, like retail, becoming a systems analyst or progressing into IT project management.

## **Data scientist**

A [data scientist](#) uses a combination of programming knowledge and [analytical skills](#) to

find solutions and opportunities through data. This could look like building a system to mine data, then 'cleaning' the data to ensure it's accurate, then presenting subsequent insights to stakeholders, to help them make smarter business decisions for the whole company.

### **Qualifications needed to be a data scientist**

You will need to complete a bachelor's degree in [computer science](#), IT or mathematics to start a career in data science. As this field involves understanding and manipulating large amounts of data, you will need to have excellent attention to detail, a natural affinity for mathematics, and good communication skills to be able to present your findings in an accessible manner.

### **Career paths for a data scientist**

Along this pathway, you'd typically start out as a junior data scientist, then progress to a mid-level role before becoming a senior data scientist. You might be able to fast-track your progress by completing a PhD or you may pursue a career as a data analyst, data manager, [data architect](#) or data engineer. Some data scientists also become consultants to work with a range of different companies and gain experience across different industries and sectors. A senior data scientist with excellent stakeholder management skills could find themselves in a directorial role at a tech company.

### **Database administrator**

A [database administrator](#) is responsible for managing and maintaining databases i.e. the storage and organisation of information. Working in data administration will often include implementing software, gathering information, maintaining data systems, and ensuring the security and integrity of the data. It requires a high level of [technical skill](#), as well as the ability to communicate across different levels and departments of a company.

### **Qualifications needed to be a database administrator**

An entry-level database administration role will typically require you to have a bachelor's degree in information science or computer science. Attaining a master's degree can also help you gain entry to government database administration jobs.

### **Career paths for database administrator**

As a database administrator, you'll likely learn different elements of database management, including information security, data modelling, system development, data science and more. This will open up career pathways and opportunities, depending on your skills and interests.

### **User experience designer**

A [user experience designer](#) (or UX designer) combines creative, analytical and technical skills to visually design websites, platforms, apps and software in a way that makes them easy to use. Collaborating with content writers and developers, UX designers work through all stages of a project, incorporating best practices in branding, design, usability and function.

### **Qualifications needed to be a UX designer**

While a qualification in graphic design, interactive design or computer science can help you get a job as a UX designer, you can learn many of the required skills through practical experience and [on-the-job training](#). Having a strong portfolio demonstrating your skills will be the most important part of finding a job in UX design.

### **Career paths for UX designer**

UX designers have the option to work in an agency setting, doing a variety of client work, in-house creating designs for their company, or freelancing. There are different skill levels of UX designers, including entry-level, senior, lead and principal UX designer, meaning you can set a clear pathway of career progression. You can also work your way up to managing a design team or opening your own agency.

### **IT technician**

If you're an [IT technician](#), your job is to provide IT support to users. This may include installing, troubleshooting and fixing hardware and software, such as providing computer and system support to colleagues or clients. For example, an in-house IT technician would act as a general point of contact for computer assistance within a company, troubleshooting a wide range of issues, sending hardware out for repair, setting up conferencing equipment and more.

### **Qualifications needed to be a IT technician**

When applying for IT technician roles, you'll typically need a bachelor's degree majoring in computer science or information technology. As you'll be providing technical support to laypeople – some of whom might not be very computer literate – you'll also need good communication and [problem-solving skills](#).

### **Career paths for IT technician**

Working in IT opens up many opportunities for your career. When you're just starting out, you may take on a role like help-desk technician or desktop support, while studying or training to work in [cybersecurity](#) or software development.

## **Computer programmer**

A [computer programmer](#) writes, modifies, deploys, maintains and tests computer software, to be used by a wide range of users. There are many different programming languages, so the types you learn will influence your career and dictate which jobs you are qualified to do.

### **Qualifications needed to be a computer programmer**

A certificate or diploma in information technology (programming) can help you in securing an entry-level computer programmer role. There are [often internship or traineeship programs](#) for becoming a programmer, giving you opportunities to start your career without formal qualifications.

### **Career paths for computer programmers**

The coding experience you'll develop as a computer programmer will help you advance your career in a number of areas. With a generalist background, you can become a computer systems analyst or cross-skill in software development. Gaining some management experience can help you lead a team in the future.

## **Software engineer**

Software engineering is a specialised area of computer science involving the design, development, testing and maintenance of software applications. With skills in programming, you'll be building software solutions for users, whether that's for mobile applications, games, robots or operating systems.

### **Qualifications needed to be a software engineer**

Having a bachelor's degree in computer science or software engineering will help you become a [software engineer](#). You may also need to undertake an internship or traineeship to build practical experience, to help you get a full-time entry-level role.

### **Career paths for software engineers**

Aspiring software engineers can enjoy linear career progression through junior, mid-level and senior or specialised positions by continuing to upskill in their chosen area. Software engineers may also develop the skills to transfer into a job in data engineering, QA engineering, full-stack engineering and more.

## **Network engineer**

[Network engineers](#) plan, develop, implement, maintain and troubleshoot computer networks and systems services. In this type of role, you'll typically work in a company's IT team, or for a network engineering company who provides support to clients. Your skills can allow you to work freelance, providing network systems support to businesses on a contractual basis.

### **Qualifications needed to be a network engineer**

To become a network engineer, you will likely need a certificate or diploma in

information technology, specialising in networking, support, maintenance, security and programming. A degree in computer engineering or related would also make you a good candidate for a network engineering role, particularly if you have hands-on experience.

## **Career paths for network engineers**

Studying to be a network engineer can set you on a career path to becoming a network administrator, a network analyst, a network manager or a solutions architect. You might even progress to the role of chief technology officer or chief information officer.

There are countless types of jobs in information technology. Whether you have a passion for design, data solutions, building websites or troubleshooting everyday problems with computers, you'll find an IT career path that's right for you. One of the best things about IT is that many skills are transferable across industries and companies, allowing your [career path](#) to go wherever your interests lead.

## **FAQs**

### **What soft skills are important for success in IT?**

Some important [soft skills](#) for a career in IT include:

- Creativity, to find solutions outside the box
- Communication skills, to be able to provide support
- Teamwork, to collaborate on projects
- [Leadership skills](#), to help you progress in your career
- Flexibility, to adapt as technology advances

Honing your soft skills will help you stand out to employers and give you the best chances of an IT career that will take you to a leadership level.

### **What qualifications are most valuable for a job in IT?**

Degrees in computer science, information technology and computer engineering are most useful for jobs in IT. You can specialise in your desired areas to grow your career in a particular direction, such as security, systems and networks, development operations (DevOps), cloud computing, machine learning and beyond.



## **Is a career in IT good?**

Generally speaking, IT professionals are in high demand, making IT a good career choice. IT is one of the fastest-growing sectors in the world, with experts needed in many different areas, including cyber security, artificial intelligence, tech support and more. The average salary of an [IT specialist in Australia](#) ranges from \$70,000 to \$90,000. Not all tech jobs are future-proof, however. Staying in demand means adapting with changing technologies and staying up to date with industry developments.

## **How do I get a manager role in IT?**

To get a manager role in IT, you'll need around five years of experience in an IT role, an advanced knowledge of IT systems, strong analytical skills, and demonstrable people and leadership skills. You'll also need a bachelor's degree in a relevant area of IT, such as computer science or information technology. Certifications in management can also help.