

Careers in Digital Technology

The Scots have long been a nation of innovators. We can claim to have invented television, radar, the telephone, penicillin and much more. And we're still changing the world in 2017 – only now it's through our dynamic and thriving digital technology industry. It's one of the major success stories of modern Scotland – and, with the right skills, your daughter or son could be part of it.



Bright ideas

People who work in digital technology are problem solvers. They think. They create. They ask 'What if?' every day to come up with new ideas to change the world.

- What if you could save lives with an app?
- What if you started the next social network?
- What if you had an idea worth millions?
- What if you could start on £23,000 a year?
- What if you could shape the digital world?



Why choose a career in digital technology?

There are lots of jobs.

In fact, the sector is so successful that many companies are struggling to recruit enough staff with the right skills. It's estimated that until 2020, 11,000 new entrants are needed each year to meet demand.

It's well paid.

A trainee web developer can expect to start on £23,000, with pay quickly increasing with more experience.

It's a dynamic industry.

The digital technologies sector is expanding and changing rapidly, making careers varied and exciting.

It's a different way of working.

Creating innovative products has led to innovative ways of doing things, and a lot of the old rules about how businesses operate have been thrown out.

It's a way to do something worthwhile and change the world.

Tech firms focus on coming up with new and better solutions to old problems.

It's a way to be part of the future.

Digital technology is now part of nearly everything we do. It's where some of the most innovative companies in the world are putting their resources as they see digital jobs as the jobs of the future.



80,000

PEOPLE WORK IN
DIGITAL TECHNOLOGY
IN SCOTLAND

To the parents of any young kid who's interested in digital technology, I'd say it's a fantastic industry to get into. It's changing all the time, it's growing and there's always something new. And it's a huge part of so many other industries.

MICHELLE CASHMORE, JAVA DEVELOPER AT FANDUEL IN EDINBURGH



Who works in digital tech?

Around 80,000 people work in digital technology in Scotland. Of these, 40% are employed by specialist technology companies. The rest have tech roles in other sectors such as financial services, life sciences and the medical profession. They design computer games, fight hacking and fraud, develop robots and analyse data to discover cures for illnesses, among many other roles.

Here are a few of the jobs out there:

- app developer
- rehabilitation engineer
- computer programmer
- games designer
- social media manager
- data analyst
- website developer
- forensic computer analyst

To hear more from the people who work in the industry, see www.digitalworld.net



What are digital skills?

One of the best things about digital technology is how fast it changes. The jobs that people will be doing in the sector in ten years' time haven't even been thought of yet. There are no hard and fast rules about which subjects students should choose if they want to get into the industry.

Employers will be looking for a broad range of skills, including:

- excellent problem-solving skills
- a logical mind
- creativity
- good programming/coding skills
- a good understanding of how people interact with websites
- good communication skills
- an up-to-date knowledge of developments in technology

STEM subjects (science, technology, engineering, maths and computing science) will certainly be useful, and many degree courses will require Highers in maths and one science. Subjects that show good communication skills, such as administration and english, are always useful to employers. For web or games design, more artistic subjects would also be useful.

You'll often be tackling problems that no one has had to solve before, so you have to be creative. I would encourage anyone to work in tech, because it is all around us. Nowadays you can't book a taxi, get in touch with a friend or go on holiday without using some kind of digital service, so why not be part of it?' ALEX HUMPHRY-BAKER, UX (USER EXPERIENCE) DESIGNER WITH BEMO IN EDINBURGH



What is coding?

The emphasis used to be on learning how to use software. Now it's about learning to develop the software and write the code that makes the digital world work, almost like creating a recipe.

- Coding is the process of writing computer programs to turn creative ideas into reality.
- It's behind every website, smartphone app and game.
- It's what makes digital technology possible.
- Once you've learnt one coding language, it becomes much easier to learn another.



Is coding right for your child?

They won't know till they try! Gaining some practical skills in coding while still at school will really help. Coding clubs are a brilliant way to do this in a relaxed, fun environment. Getting involved, giving it a go and starting to create could help set them on the right path.

See www.digitalxfund.scot for more information on what's available in your area.



Myths about working in digital technology

It's all about maths.

Not so. It's just as important to learn to think logically, be able to solve problems and to communicate effectively.

It's only for the brightest.

Coding requires intelligence, yes, but more important is perseverance and a willingness to learn.

It's boring, lonely work.

The opposite is true. Crafting code can be really satisfying, like solving a puzzle, and that takes teamwork – the industry thrives on talented people collaborating to find solutions.

It's only for boys.

Definitely not. Girls are as suited to a career in digital technology as boys. Tech companies want a diverse workforce, attracting the best talent.

It's just another office job.

Actually, digital is one of the most innovative job sectors, so many of the old ways of doing things don't apply – allowing flexible hours, optional dress codes and a better work-life balance.

It's not for creative people.

Wrong. Creativity is a crucial component in digital technology.



Did you know...?

- Some of the world's most successful tech companies started in Scotland – RockStar North, FanDuel, SkyScanner and Mashable, for example.
- The average smartphone is more powerful than all the computers NASA had in 1969 when it sent Neil Armstrong to the moon.
- Tech firms love to keep things fun in the workplace. Google is rated as the world's most attractive employer.
- It's never too early to get into coding. Scratch is a computer language designed for beginners, while children as young as five can try making animations using Scratch Jr.
- Despite being a generation of digital natives, many young people don't know that coding is something they could make a living from.



What next?

Coding clubs

CoderDojo provides free coding clubs for young people.

www.coderdojoscotland.com

Code Club is a nationwide network of free after-school coding clubs for children aged 9 to 11.

www.codeclub.org.uk

Online courses

Nearly half of all web developers are self-taught but you can use lots of free online courses that teach the basics of coding. See www.digitalworld.net/retrain/coding-courses for more information.

School subjects

Guidance/pupil support staff and the career adviser can point you in the right direction. It's worth remembering that although computing science is available at Higher level, it's not essential for entering the industry.

Apprenticeships

These combine working and learning, giving young people the skills, experience and qualifications that employers are looking for.

www.myworldofwork.co.uk/getting-job/apprenticeships

Further Education

There are 400 university and college courses related to careers in digital technology in Scotland alone. Search for courses at www.digitalworld.net and wwwucas.com



Further information

Digital World: Developed by Scotland's digital technologies sector and Skills Development Scotland, this website is full of information about working in the industry. www.digitalworld.net



the National Parent Forum of Scotland

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