Digital Careers and Skills Resource Pack



Use this guide to explore digital careers, skills and further resources

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ARTIFICIAL INTELLIGENCE

WHAT IS AI

Artificial intelligence (AI) is the simulation of human intelligence processes by machines, especially computer systems.

CAREER ROUTES

- Data Analytics
- User Experience
- Researcher
- Software Engineer
- Al Engineer
- Data Mining Analysis

ACADEMIC QUALIFICATION

Many employers prefer applicants with a master's degree in computer science or higher. Traditional education can provide a strong framework for a career in Al.

TRAINING & APPRENTICESHIPS

Page 1

Level 7 Artificial Intelligence Data Specialist https://www.coursera.org/professionalcertificates/ai-engineer Computer Science with AI - Leeds University



AUGMENTED AND

WHAT IS AR AND VR

Augmented reality (AR) adds digital elements to a live view often by using the camera on a smartphone. Virtual Reality (VR) allows the user to view a digital world through a VR headset.

CAREER ROUTES

- Games Designer
- Software Developer
- Game Programmer
- Audio Engineer
- Games Animator
- Games Artist

ACADEMIC QUALIFICATION

A degree in computer science or software engineering, mathematics or simulated physics is preferred by employers.

TRAINING & APPRENTICESHIPS

Level 3 AR and VR Level 7 Game Programmer <u>Virtual Reality Training Course</u>



EMPLOYMENT AND SKILLS LEEDS

CYBER SECURITY

WHAT IS CYBER SECURITY

Cyber security is a complex field that may include safeguard an organisation's files and network, install firewalls, create security plans, guard customer data, and monitor activity.

CAREER ROUTES

- Cyber Security
- SOC Analyst
- Software Security
- Ethical Hacker
- Web Developer
- Cloud Security

ACADEMIC QUALIFICATION

A degree in Computer Science, IT, Systems Engineering, or a similar field is typically needed to enter the cyber security area.

TRAINING & APPRENTICESHIPS

Level 2 Data Technician Level 3 Cyber Security Technician Level 4 Cyber Security Technologist



CYBER SECURITY



FEEDER ROLES

Roles which you probably didn't think could help you secure a role in Cyber security: Networking, Software Development, Financial and Risk Analysis, Security Intelligence and IT Support

ENTRY LEVEL ROLES

Cybersecurity trainee, Cybersecurity Specialist, Cyber Crime Analyst and IT Auditor.

Skills required for these roles include: Communication - both written and verbal communication play a key role in cybersecurity. Collaboration - as a cybersecurity analyst, you'll likely work with a larger security team of other cybersecurity professionals, risk management, adaptability and critical thinking





MID LEVEL ROLES

Cybersecurity Analyst, Cybersecurity Consultant and Penetration and Vulnerability Tester (testing and hacking)

Skills required for these role include all of the above and Fundamental technological skills, programming, risk identification & management, data management & analysis, Cloud implementation & management and Logical reasoning & troubleshooting



SENIOR ROLES

Cybersecurity Manger, Cybersecurity Engineer and Cybersecurity Architect

For Senior levels role you will be expected to have skills and knowledge in: scripting, controls and frameworks, intrusion detection, network security control, operating systems, incident response, cloud and DevOps



DATA ANALYTICS

WHAT IS DATA ANALYTICS

Data analytics is the process of examining data sets to find trends and draw conclusions about the information they contain.

CAREER ROUTES

- Data Engineer
- Data Analyst
- Data Scientist
- Business Analyst

ACADEMIC QUALIFICATION

Employers look for talent who have the ability to tell a story out of numbers, data analysis skills, a knack for coding, communication skills and curiosity.

TRAINING & APPRENTICESHIPS

Level 3 Data Technician Level 4 Business Analyst Level 4 Data Analyst Skills Bootcamp providers



DEVOPS

WHAT IS DEVOPS

As a DevOps Engineer, you need to possess extensive knowledge of the software development life cycle (SDLC). You also must be an expert in implementing various DevOps automation tools and processes to resolve complex operations problems.

CAREER ROUTES

- DevOps Engineer
- DevOps Evangelist
- Build Engineer
- Release Manager
- Product Manager
- Security Engineer
- Data Analyst

ACADEMIC QUALIFICATION

To become a DevOps Engineer, you typically need a degree qualification in computer science, software development or a related field, as well as industry experience.

TRAINING & APPRENTICESHIPS

Level 4 Software Developer Level 4 DevOps Engineer Level 3 Information Communications



DIGITAL MARKETING

WHAT IS DIGITAL MARKETING

Digital marketing, also called online marketing, is the promotion of brands to connect with potential customers using the internet and other forms of digital communication.

CAREER ROUTES

- Digital Marketing Manager
- Search Engine Optimiser
- Social Media Marketer
- Content Marketer
- Email Marketer

ACADEMIC QUALIFICATION

You don't need a university degree to get into digital marketing. It is important to have good knowledge of digital marketing and how it works.

TRAINING & APPRENTICESHIPS

Level 2 Digital Skills for Work Level 3 Essential Digital Skills Level 3 Advertising and Media Executive Level 6 Digital Marketer



FINTECH

WHAT IS FINANCE TECHNOLOGY

Fintech, a portmanteau of "financial technology", refers to firms using new technology to compete with traditional financial methods in the delivery of financial services.

CAREER ROUTES

- Quantitative Analyst
- Blockchain Developer
- Product Manager
- Cybersecurity Analyst
- Finance Assistant
- Software Developer
- IT Support

ACADEMIC QUALIFICATION

A degree in Computing, Computer Science, or Software Engineering. Accounting and bookkeeping skills and a knowledge of computer programming.

UNIVERSITIES OFFERING COURSES

Regent's University London University of Reading University of Bradford



HEALTH CARE TECHNOLOGY

WHAT IS HEALTH CARE TECHNOLOGY

Health technology is defined by the World Health Organisation as the "application of organised knowledge and skills in the form of devices, medicines, vaccines, procedures, and systems developed to solve a health problem and improve quality of lives".

CAREER ROUTES

- Analytics Consultant
- Product Engineer
- Medical Coder
- Systems Analyst
- IT Analyst
- Programmer Analyst
- Healthcare Services Administrator
- Healthcare Information Technician

ACADEMIC QUALIFICATION

You must have a 1st or 2.1 either in an undergraduate honours degree or an integrated master's degree in a pure or applied science subject relevant to the specialism for which you are applying.

UNIVERSITIES OFFERING COURSES

NHS Scientist Training Programme (STP) UWE Bristol Arden University





PROGRAMMING FOR VIDEO GAMES

WHAT IS VIDEO GAME PROGRAMMING

Game programming, a subset of game development, is the software development of video games. Game programming requires substantial skill as specialization in one or more of the following areas: simulation, computer graphics, artificial intelligence, physics, audio programming, and input.

CAREER ROUTES

- Gameplay Animator
- Game Developer
- Game Design Intern
- Game Code Director
- Lead Render Tech Programmer

ACADEMIC QUALIFICATION

Typically, individuals looking to become video game developers should achieve at least a bachelor's degree in software engineering, or a related field.

TRAINING & APPRENTICESHIPS

Leeds Arts University De Montfort University University of Northampton Level 7 Game Programmer



🖹 GAMING 🗧

GAMING IS THE FASTEST GROWING ENTERTAINMENT INDUSTRY HERE ARE SOME OF THE CAREERS INVOLVED WITH CREATION, DEVELOPMENT AND IMPEMNTATION OF A GAME

PRODUCTION DEPARTMENT



Production department - this team are responsible for organising the creation of a game, they make it happen on time and within the budget. They include: assistant games producer, gommunity manager, Esports producer, games producer, games publisher and marketing executive

DESIGN DEPARTMENT

This group of people create the look, feel and story of the game, they decide how the game will play. Roles within this department are gameplay designer, lead games designer, level designer, User experience designer (UX) and a writer





ART DEPARTMENT

This team is responsible for creating the artwork, both 2D and 3D, for the characters, vehicle and environments. They include the following roles: 3D modelling artist, concept artist, environment artist and texture artist

ANIMATION DEPARTMENT

This group of people use the 2D and 3D artwork, they create the illusion of movement in the characters and objects





TECHNICAL DEPARTMENT

This team act as a bridge between programmers and artists to make more complex art possible. They include graphics programmer, technical artist and a visual effects artist (VFX)

AUDIO DEPARTMENT

This team collaborate & compose the music and create sound effects that can be integrated into the game. They include roles such as audio programmer. music composer and sound designer.



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PROGRAMMING DEPARTMENT

This team work together with coders who improve the engine and those who make the characters seem intelligent. They include artificial intelligences programmer, engine programmer, gameplay programmer, generalist programmer, network programmer, physics programmer, tools engineer and virtual reality programmer (VR)

QUALITY ASSURANCE DEPARTMENT

This group join forces to look in detail at any mistakes in the game, they check for bugs, glitches and spelling errors. The team includes games tester and quality assurance build engineers (QA).

SOFTWARE DEVELOPMENT & ENGINEERING

WHAT IS SOFTWARE ENGINEERING

Software engineering is the branch of computer science that deals with the design, development, testing, and maintenance of software applications.

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CAREER ROUTES

- Junior Software Engineer
- Mobile Developer
- Software Developer
- Chief Technology Officer
- Systems Engineer
- Senior Software Engineer
- Data Engineer
- Associate Engineer

ACADEMIC QUALIFICATION

To work in Software, you typically need a related qualification in computer science, software development or a related field, as well as industry experience.

TRAINING & APPRENTICESHIPS

Level 4 Software Developer Level 4 Software Tester Skills Bootcamp providers



SPACE TECHNOLOGY

WHAT IS SPACE TECHNOLOGY

Space technology is technology for use in outer space, in travel (astronautics) or other activities beyond Earth's atmosphere, for purposes such as spaceflight, space exploration.

CAREER ROUTES

- Assembly Engineers
- Astronomy
- Astronaut
- Space Research
- Space Law
- Space Tourism

ACADEMIC QUALIFICATION

A minimum of an honours degree (or equivalent qualification) in physics, astronomy, geosciences, chemistry, engineering or mathematics is typically required.

UNIVERSITIES OFFERING COURSES

Open University University of Surrey University of Bath University of Southampton



Digital Training Providers

There are a range of options for gaining digital skills, many are funded (subject to eligibility). Here are just some of the digital training providers available. Click on the logos below to find out more.





CODE FIRST GIRLS

CODE FIRST GIRLS

BECOME A Kick-Ass Developer

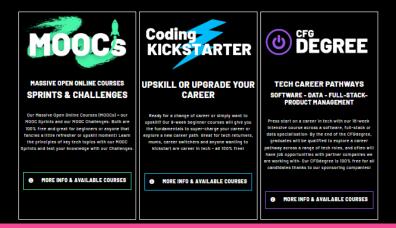
The time is now. With women representing only ~17% of the tech industry, we are dedicated to moving this stat in the right direction!

Our role is to help more women gain the skills, confidence and tools they need to kick-start, revamp, or reignite their career in tech through our courses and job opportunities.



FROM BEGINNER TO ADVANCED

From beginner to more advanced, we want to make getting into tech for women super accessible and create the next generation of future tech leaders. Explore our Code First Giris courses below.



BECOME A CODE FIRST GIRLS MEMBER

O CLICK HERE TO SIGN UP
■

Who are Digital Futures?

We are a purpose-led technology training and services company. Our mission is to transform the lives of others, helping individuals from all backgrounds acquire the necessary skills and confidence to start their career in technology.

By focusing on potential, rather than background or experience, we unlock exceptional talent and help people thrive in diverse and high-performing teams.

If you have the right mindset and drive, we will help you reach your career goals, preparing you to become a leader of tomorrow.

We offer programmes in:



What's on offer?

12 weeks of free, expert-led training in your chosen pathway

Industry-recognised certifications to demonstrate your technical capability

A two year industry placement with one or more of our clients

A guaranteed career path with great progression opportunities

An opportunity to enhance your professional and personal development

Do you want to start your career in tech?

We're hiring software engineers, data analysts and data engineers in London, Stevenage, Leeds and Edinburgh.



Who can apply?

It doesn't matter where you're from, if you attended university or whether you have experience in technology. We actively encourage applications from individuals from non-traditional backgrounds.

Apply now:





Generation is a charity in the UK&I with the mission to support people facing barriers to employment into life-changing careers that would otherwise be inaccessible.

We are part of a global network of non-profits that have supported >80,000 people across 17 countries on their journey to employment.

Deepdive on tech programmes

Programme

Generation

Cloud Support Practitioner / DevOps Engineer

Cloud Platform Engineer

Data Engineer

Data Analyst

IT Support & Cyber Security

Learners graduate ready to ...

Configure, maintain, troubleshoot AWS cloud computing products and services, providing first line support to colleagues and supporting development teams

Perform the coding and software engineering that brings the architect's vision to life. Merge traditional programming skills with specialized knowledge in one or more of the leading cloud platforms' development environments to build, deploy and optimize cloud-based applications

Develop maintain and test robust data pipelines, products and databases to support data analysis working with Python, SQL, ETL, Data Lakes, Snowflake, AWS Lambda

Prepare, collect, cleanse and manage data to identify trends and patterns through exploratory data analysis and presenting through visualization tools working with Excel, SQL, Data Warehouses, Python and PowerBI.

Work on a Help or Service Desk to record, identify, diagnose, resolve or escalate technical issues regarding hardware, software and networking problems for colleagues or customers delivering an excellent experience. Understand Cyber Security fundamentals, including user security and encryption, threat analysis and managing risk, computer protection principles, social engineering.

Ready to change your life?

Get started by exploring our free, life-changing programme offerings. Not sure what's right for you? Check your eligibility and kick-start your new career today.

1,500+

people like you supported into jobs 90%

still in their job after a year

2 OF 3

alumni promoted in past year

GET STARTED

Power your future in tech

About the program

IBM SkillsBuild is a free education program focused on underrepresented communities in tech, that helps adult learners, and high school and university students and faculty, develop valuable new skills and access career opportunities. The program includes an online platform that is complemented by customized practical learning experiences delivered in collaboration with a global network of partners.

Priority populations include: underrepresented minorities, women, economically disadvantaged, veterans, neurodivergent, refugees.

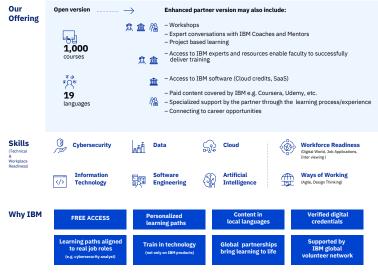
IBM SkillsBuild Serves

IBM SkillsBuild



Adı

Adult learners



Start today, learn more at skillsbuild.org

IBM is committed to skilling 30 million people by 2030

IBM.



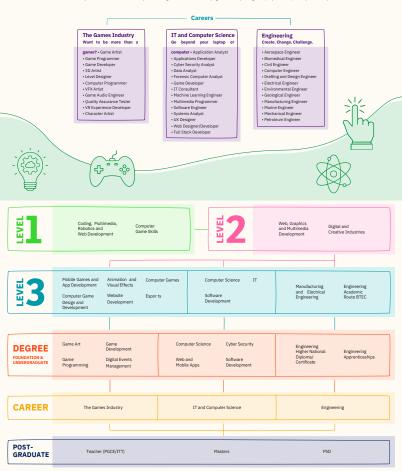
Studying for a Career in the Digital World

Passionate about video games? Curious about how gadgets work? Ready to change the tech of the future? It sounds like a job in the digital world is for you.

You could join the 1.1 million people working in computing and digital technology.

With so many careers to choose from, you could be shaping the future while doing what you love.

Below you can learn about some of the jobs in the digital world and how studying at Leeds City College can put you on the path to your dream job.





We continuously see an increasing demand for the tech industry - making coding a really clever career choice.

We're one of the UK's leading coding bootcamps for graduate outcomes, and have now trained over 2,000 people. But the most important stories we have to tell are about individual people - our graduates - who have come to us from so many different walks of life: from refuges to delivery drivers, from lawyers and doctors to parents looking to return to work after having a child.

We teach our students skills that businesses say they want. And we teach them well. It's as simple as that.

All of our bootcamps are full-time Monday to Friday, and we've got funding from the government Skills for Life Scholarship that can help you to do the course for FREE!



Software Development Bootcamp

Our Software Development Bootcamp covers a mixture of back-end and front-end with a focus on building web applications. This is our original bootcamp that, we have offered since 2017, the curricultum to ensure you are getting the most upto-date information that will help you secure a role in tech.

Find out more here >



Data Engineering Bootcamp

In direct response to one of the tech industry's most sought-after specialisms, we launched our 13-week full time bootcamp. Our Data Engineering bootcamp course focuses specifically on the "back-end" of software. You'll learn JavaScript, Python, PSQL and the fundamentals of Cloud.

Find out more here >



Cloud Engineering Bootcamp

What didn't exist as a separate job a few years ago is now one of the most sought-after skillsets in the industry. Our newest boottamp focuses on one of the most in-demand jobs the finod stranginger the Cloud Engineering curriculum prioritises cloud development, which is an ever-growing part of the tech industry.

Find out more here >



Taken a career break and want to return to software engineering? Your journey back to the tech industry starts here. Tailored support and our award-winning free programmes help build confidence, refresh tech skills and reignite careers.

We believe in lifting people up. Our programmes are designed to help you rediscover your potential. We are passionate about empowering individuals with confidence and skills to achieve the career they want. Whether you're looking to refresh your technical skills after a career break, build confidence and leadership skills, or upskill in new technical areas, we've got a proven programme for you.

Javascript & TypeScript Programme

This free 13-week re-skilling course in JavaScript and TypeScript is the perfect avenue to get you back to tech and back to feeling confident in your skills and experience. The Tech Returners JavaScript and TypeScript programme is split up into four distinct sections. Each section includes a blend of both technical and Career and Mindset coaching.

Discover more about the programme here



FUEL YOUR CAREER IN TECH

Unlock Your Future with a QA Apprenticeship

2





FUEL YOUR CAREER IN TECH

Unlock Your Future with a QA Apprenticeship



If you're eager to get your career underway, the UK's tech industry is the top spot! The UK tech sector continues to grow as technology drives economic growth by creating new jobs. It is estimated that digital technology could create over £413 billion in additional value for the UK economy by 2030, which is the equivalent of 19% of the entire UK economy. QA provides apprenticeships and degree apprenticeships that help shape not just your own tech career, but the world we live in.





- QA is the UK's largest IT and digital skills training provider.
- 90% of our apprentices go straight into full-time work, following their apprenticeship.
- We give apprentices the best choice of employer - from household names like Amazon, NatWest, Boohoo & Barclays to edgy start-ups.





You develop your skills and earn an industry recognised gualification at the same time

How

apprenticeships work

An apprenticeship is a modern,

hands-on way to train for an











"I was studying BTEC IT in college without a very clear goal in mind. After I started my apprenticeship, I was able to really push myself in a meaningful way

Youness, Software **Developer Apprenticeship**

"This programme has impacted my life massively. It has opened the door for me to repurpose my work life with a 180 degree turn."

Debora . Information Communications Technician Apprenticeship

"My apprenticeship with QA has been completely life changing for me. I now stand as Head of Marketing for YARD direct."

Lawrie, Digital Office Support Annrenticeshin



秘 Education & Skills Funding Agency

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Future job prospects:

matrix

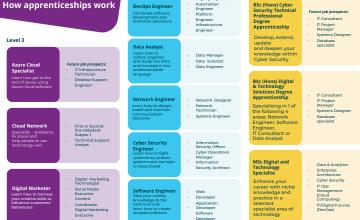


Our degree and masters' programmes





How apprenticeships work



SKILLS CONNECT



With a Skills Connect fully funded adult training course you can get ready for the next work opportunity that comes your way, feel confident and prepared to apply for exciting new job roles, progress in your career or start your career iourney after leaving education.

All our courses are designed by local employers, so we'll ensure you leave with skills needed right here in West Yorkshire, right now.

Courses Include:

- Skills Bootcamp Introduction to Search Engine Optimisation
- Skills Bootcamp in Leadership and Management for the Digital Sector
- Skills Bootcamp in Web Design and Development

Visit

www.futuregoals.co.uk/skillsconnect













Key Skills, AI and Digital Tools for Project Managers

Part Time - Remote Learning

Fully funded 12 week part time course

Learn key digital tools and processes

- Project Planning, resourcing and budgets
- Communication and presentation skills
- Defining a minimum viable product
- And more



Scan me to apply

0113 460 1024 10-12 East Parade Leeds LS1 2BH applications@thecodersguild.org.uk www.thecodersguild.org.uk

ENROLL NOW

Skills Bootcamp in Project Management and Digital Skills for Creative and Cultural Sectors













Part Time - Remote Learning

Kick start your tech career

fully-funded 12wk coding course

Guaranteed job interview

> Plus 6 months career search support



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or Get In Touch! 0113 460 1024 10-12 East Parade Leeds LS1 2BH applications@thecodersguild.org.uk www.thecodersguild.org.uk

ENROLL NOW

Skills Bootcamp in Web Design and Development

AMEUNO







LEEDS CITY REGION ENTERPRISE PARTNERSHIP

FUTUREGOALS

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Leading Teams in a Digital Age

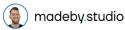
Take a fully-funded 12 week leadership course.

Short, convenient, remote group sessions.

- Improve Communication
- Enhance Collaboration
- Promote Inclusion
- > Upgrade Efficiency
- Increase Wellbeing

44

This Course was exactly what we needed at the time to help us scale. The training comes from real world experience with everything related to my day-to-day activities as a leader.



Matt Wheeler, Co-founder and Digital Director



Scan me to apply

or Get In Touch! 0113 460 1024 10-12 East Parade Leeds LS1 2BH applications@thecodersguild.org.uk www.thecodersguild.org.uk

ENROLL NOW

Skills Bootcamp in Leadership and Management for the Digital Sector







LEEDS CITY REGION ENTERPRISE PARTNERSHIP

FUTUREGOALS

<u>Video Game</u> <u>Careers</u>

Digital Skills & Careers Resources

IBM Skills Build Job Skills, Courses and Credentials



Growing Talent Digital Leeds <u>Space Careers</u>

<u>National Careers</u> <u>Service-</u> IT and digital <u>careers</u>

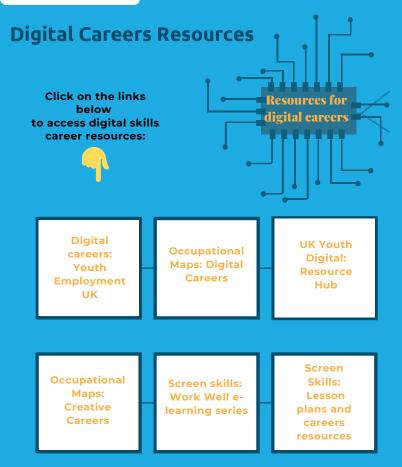
Future Goals

<u>Digital</u> <u>Apprenticeships</u> Pathways into digital careers

<u>Space Hub</u> <u>Yorkshire</u>

+







Tech Meet Up and Events



Interested in meeting other tech-minded individuals, networking and attending interesting tech events? Check out the list below:

- Leeds Digital brilliant tech events from across the Leeds City Region: <u>https://leedsdigital.org/whats-on/</u>
- Bruntwood SciTech Leeds various events including Tech Tuesdays, Platform Presents, Female Founders.
 Follow Bruntwood SciTech on eventbrite: <u>https://www.eventbrite.co.uk/o/bruntwood-scitech-30524993628</u>
- Find tech events at Meetup: <u>https://www.meetup.com/find/gb--leeds/technology/</u>
- Search jobs, events and workspaces at Leeds.tech: <u>https://leeds.tech/</u>
- Follow Leeds Digital Careers Fair on Linked In: <u>https://www.linkedin.com/showcase/leeds-digital-</u> <u>careers-fair</u>

