

Careers in Computer Science/ICT

COMPUTING SCIENCE

careers using computing science

bioinformatics
business analysis
computer aided design
3D modelling and animation
computer games programming
software programming
computer games testing

cyber security
IT consultant
IT support services
database administration
games production management
multimedia development
IT project management

teaching
web development
systems development
network management
computer hardware engineering
systems analysis and design
software engineering



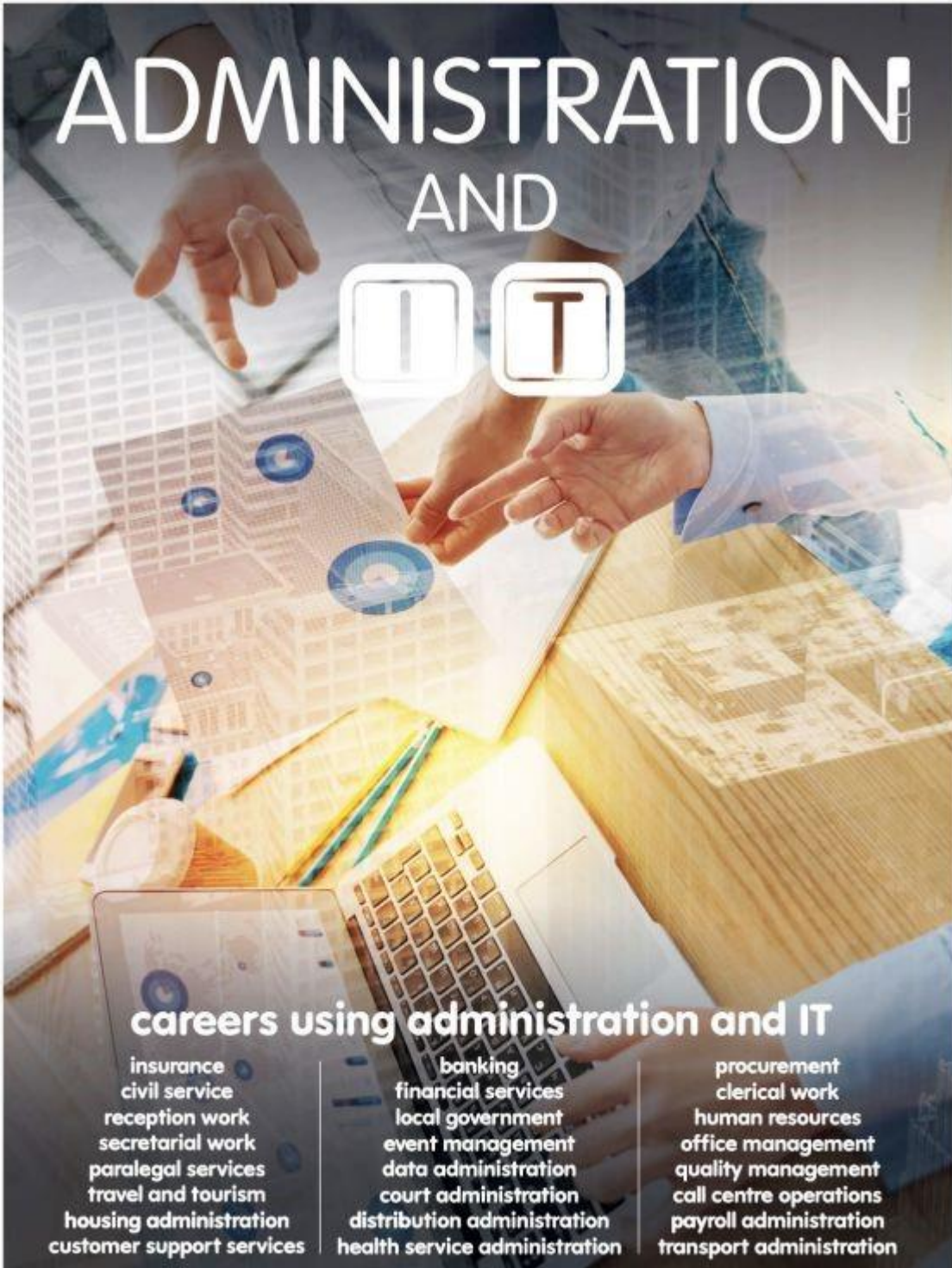
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gateway

Careers in Computer Science/ICT



ADMINISTRATION AND IT

careers using administration and IT

insurance civil service reception work secretarial work paralegal services travel and tourism housing administration customer support services	banking financial services local government event management data administration court administration distribution administration health service administration	procurement clerical work human resources office management quality management call centre operations payroll administration transport administration
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5 WORK SKILLS COMPUTER SCIENCE WILL GIVE YOU



PROBLEM SOLVING



In school: Computers need specific and detailed instructions to follow to successfully complete a task. That's essentially what a computer program is. You'll learn how to write programs, taking those instructions and putting them into a language a computer can understand. Not everything will work...

MATHEMATICAL SKILLS



In school: Mathematical principles are essential to computer programming. You'll practice binary and hexadecimal conversions and calculations to simulate how a computer processes instructions. Computer science also requires practical skills including evaluating Boolean algebra, drawing logic...

DATA ANALYSIS



In school: We create a vast amount of digital data. Capturing and storing this data is an essential part of computer science. You'll explore the abstract concepts of attributes, records and files, as well as learn about specific data types and structures, which are used to represent information, and how to apply...

CREATIVITY



In school: Creativity and problem solving go hand in hand. Sometimes you'll need to think creatively when you're writing a computer program because it may not be obvious how to solve a particular problem. You might also have creative ideas for the development of an app or computer game.



LOGICAL THINKING



In school: Computers rely on logic to run and you need to learn how to think 'algorithmically'. You have to make sure your programs are logically sequenced when you write them and know how to avoid common errors through data validation and verification techniques. You'll also learn to...



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Careers in Computer Science

If you see yourself designing and creating software systems, then computer science might be the right course of study for you. If you are thinking of becoming a manager or administrator to a technical enterprise, a degree in computer science or information and computer sciences could provide you with the background needed to achieve your goals. If you are thinking about becoming a researcher in a technical field, information and computer sciences could provide you with the skills and knowledge necessary to succeed.

Computer science is a dynamic and rapidly growing area that has become an integral part of the world that we live in today. Having a degree in this field will provide you with a deep understanding of theories and emerging technologies. This knowledge and experience will allow you to develop cutting-edge solutions that address today's challenges. When applied in an interdisciplinary fashion, students can also draw on their other areas of interest such as biology, business, cyber security, economics, engineering, information assurance, languages and linguistics, mathematics, physics, public policy, etc., to address a wider range of complex issues.

Jobs directly related to Computer Science include:

- Application analyst
- Cyber security analyst
- Data analyst
- Forensic computer analyst
- Game designer
- Games developer
- Information systems manager
- IT consultant
- Software engineer
- Systems analyst
- Web designer
- Web developer

Jobs where Computer Science would be really useful include:

- IT sales professional
- IT trainer
- Nanotechnologist
- Network engineer
- Supply chain manager
- Telecommunications researcher

Typical employers

- Common employers are IT consultancies and IT service providers. However, as most businesses rely on computers to function effectively, there are also

opportunities within the IT departments of major organisations in sectors such as:

- aerospace and defence
- agricultural
- financial services
- healthcare
- manufacturing
- public and third sectors
- Retail

You can also find opportunities with a range of small to medium-sized enterprises (SMEs).

Another option is to set up your own business, providing IT services such as web design and consultancy.

Skills for your CV

Computing degrees combine theoretical study and practical projects, teaching you subject-specific skills including:

- programming languages
- hardware architecture and construction
- network design and engineering
- software engineering
- multimedia design
- software tools and packages.
- You'll learn how to specify, design and construct computer-based systems, evaluate and recognise potential risks and design creative solutions. ●

More generic skills include:

- teamwork and leadership
- communication
- problem-solving
- negotiation
- time management and organisation
- report writing
- commercial awareness.

Studying Computer Science at university – topics you may cover:

- foundations of computer science
- Java and object-oriented programming
- operating systems
- digital electronics
- graphics
- systems – including computer design, computer networking
- programming – including compiler construction, advanced algorithms

- applications and professionalism – including artificial intelligence, graphics, security

Apprenticeship in Computer Science & ICT

Time to get connected in the fast-growing digital tech sector with digital and ICT apprenticeships

Technology is fast becoming the biggest career opportunity for young people and the digital sector in the UK is growing and highly respected throughout the world. Careers can cover many areas, helping to keep modern businesses running efficiently and profitably. Trained digital professionals ensure that devices and systems run smoothly, are protected from cyber threats, and can be utilised to connect users and businesses.

At a time when companies such as Amazon and Apple are being valued at \$1 trillion, and everyone has access to the web through their smartphones and other devices, there is an increased need for highly trained professionals to ensure that devices and systems run smoothly, are protected from cyber threats, and can be utilised to connect users and businesses.

There are digital and ICT apprenticeships that cover the creation, implementation and use of hardware and software, giving you an array of choices if you want to focus on a career in this important sector. If you're confident with computers and know your firewalls from your algorithms, there are various technician apprenticeships available to develop your skills. Or those with a creative streak can train in software coding and testing, to create video games, mobile apps and so much more. This sector also covers apprenticeships in cyber security, as organisations in the public and private spheres become high-value targets for savvy criminals.

There are also opportunities for data enthusiasts, who are required to find information in diverse datasets to address complex problems and improve organisational processes, while the next generation of digital marketers are needed to power the growing online marketing space.

<https://apprenticeshipguide.co.uk/apprenticeship-category/industry-sectors/digital-ict-apprenticeships/>

<https://www.apprenticeships-in-sussex.com/>

APPRENTICESHIPS LINKED TO COMPUTING

- ARTIFICIAL INTELLIGENCE (AI) DATA SPECIALIST
- CYBER SECURITY TECHNICIAN
- DIGITAL FORENSIC TECHNICIAN
- DIGITAL USER EXPERIENCE (UX) PROFESSIONAL
- DEVOPS ENGINEER
- ROBOTIC ENGINEER
- SOFTWARE DEVELOPER
- AND MANY MORE!



Interested in apprenticeships, but not sure what to do next? Take a look at our 'What Now?' guide...
www.amazingapprenticeships.com

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