Careers in Mathematics and Statistics

There are varied career paths where mathematics and use of statistical research is the main focus of the role. Skills that are valued by employers include:

- Problem solving, research and analysis
- Logic and a practical approach to tasks
- Accuracy and attention to detail
- Decision making
- The ability to work with abstract concepts
- An understanding of mathematical and statistical theories and concepts

Possible Job Roles/Careers in Mathematics and Statistics

- Data Scientist
- Accountant or Finance Professional
- Research Scientist
- Statistician
- Operational Researcher
- Data Analyst
- Engineering related roles
- Software Engineer
- Computer Game Developer
- Teaching
- Meteorologist

For more detailed information about each of these job roles/career areas below, please see the sections and links below.

Data Scientist

Organisations may use large amounts of data, and data scientists turn this data into information using algorithms and machine learning. They usually work by delivering projects for customers or clients depending on their business needs, and then articulate their findings by using clear communication skills.

Employers of data scientists may work across the finance, retail, scientific research, academia and e-commerce sectors.

For more information about this job role: https://www.prospects.ac.uk/job-profiles/data-scientist

Accountant or Finance Professional

Accountants work on behalf of a company to audit accounts, provide financial advice and undertake accounts administration. This role may involve working with the accounts of large global corporations, government bodies or small independent companies.

Professional training with an accountancy body is usually required once a graduate starts working within accountancy.

For more information about this job role: https://www.prospects.ac.uk/job-profiles/chartered-accountant

There are many other varied roles available in the finance sector, including work as an actuary, insurance underwriter, pensions consultant and tax adviser. For a full range of finance related job roles: https://www.prospects.ac.uk/jobs-and-work-experience/job-sectors/accountancy-banking-and-finance/graduate-finance-jobs

Research Scientist

Design, undertake and analyse information from laboratory experiments and trials. They may work in the pharmaceutical, environmental and medical research sectors.

For more information about this role: https://targetjobs.co.uk/careers-advice/job-descriptions/278833-research-scientist-job-description

Statistician

Statisticians collect, analyse, interpret and present quantitative information. They may design and manage experiments and surveys and deal with collection of data. This role also involves processing and analysing data and looking for patterns with the view to making decisions.

Statisticians may work in many sectors including education, pharmaceutical and scientific research, finance, forensics, government, market research, sports and transportation.

For more information about this role: https://www.prospects.ac.uk/job-profiles/statistician

Operational Researcher

People working in this role look at the way an organisation operates, and uses mathematical and analytical techniques to support it to develop better business systems and processes. For example, they may look at ways of improving air traffic control processes, measuring player performance in sports teams, or to model the behaviour of retail customers.

Within the engineering sector, operational researchers may be known as "industrial engineers". Typical employers may include the armed forces, the Civil Service and Government Operational Research Service, the NHS, transport/logistics and retail companies.

For more information about this job role: https://targetjobs.co.uk/careers-advice/job-descriptions/276247-operational-researcher-job-description

Data Analyst

This role involves using high level mathematical and problem solving skills, which may involve tasks such as identifying areas to increase productivity and efficiency, develop and support reporting systems and manipulate data and information relating to business operations.

Analysts are in demand and may work across a range of sectors, including finance, consulting, education, government and science.

For more information about this job role: https://www.prospects.ac.uk/job-profiles/data-analyst

Engineering related roles

Many engineering companies may recruit mathematics graduates into roles that utilise the ability to work with abstract concepts to solve problems, high level numerical skills and to think logically. Possible types of employers could include engineering design, automotive and defence companies.

For more information about this job role: http://www.mathscareers.org.uk/article/five-different-careers-that-use-maths/

Computer Game Developer

Games developers are involved in the creation and production of computer games for PCs, games consoles, online games, tablets and mobile phones.

In some companies, you may work as a 'programmer' which means focusing on one particular area of programming e.g. network, engine, graphic and toolchain, rather than the visual design. You may be using coding and programming skills such as C++ and Python.

In other roles there may be the chance to be involved in the design side of things.

For more information about this job role: https://www.prospects.ac.uk/job-profiles/games-developer

Teaching

Teachers typically work in schools teaching in a classroom based setting. You could choose to become a primary school teacher which involves teaching ages 3 – 11 and all subjects, with an emphasis on teaching core subjects of literacy, numeracy and science.

Secondary school teachers teach ages 11 – 18 and tend to focus on a specific subject such as Mathematics.

To train as a primary or secondary school teacher, graduates are required to undertake further training at postgraduate level, to gain Qualified Teacher Status (QTS). There are now a number of training routes to achieving Qualified Teacher Status. For more information about the different routes into teaching: https://www.prospects.ac.uk/jobs-and-work-experience/job-sectors/teacher-training-and-education/routes-into-teaching

It is also possible to train and work as a teacher in the further education (post-compulsory) and higher education sectors. Further information can be found here:
Further education teacher: https://www.prospects.ac.uk/job-profiles/further-education-teacher
Higher education teacher/lecturer: https://www.prospects.ac.uk/job-profiles/higher-education-lecturer

Meteorologist

Meteorologists predict the weather and study the causes of particular weather conditions by using information from land, sea and upper atmosphere.

This role involves using high level mathematical and computing skills as well as analysing and presenting complex data.

Meteorologists typically specialise in research or forecasting work.
For more information about this job role: https://www.prospects.ac.uk/job-profiles/meteorologist

If you would like to book a careers appointment to discuss your options, please visit: https://worcester.targetconnect.net

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