Careers in Statistics

Statistics

The world is becoming more and more quantitative and data focused. Many professions depend on numerical measurements to make decisions in the face of uncertainty. Statisticians use quantitative abilities, statistical knowledge, and communication skills to work on many challenging problems, such as:

- Estimating the safety and studying the economics of nuclear power plants and alternative energy sources (at a utility company, research laboratory, the Nuclear Regulatory Commission, or the Department of Energy)
- Evaluating the environmental impact of air, water, and soil pollutants (at a research laboratory, commercial environmental clean-up firm, or the Environmental Protection Agency)
- Designing and analyzing studies to determine if new drugs and medical devices are safe and effective (at a pharmaceutical company, medical research center, or the Food and Drug Administration)
- Estimating the unemployment rate in the United States (at the Bureau of Labor Statistics)
- Analyzing consumer demand for products and services (at a consumer marketing firm, corporation, or consulting firm)
- Designing studies for and analyzing data from agricultural experiments to increase productivity and yield (at an agricultural college or agribusiness corporation)
- Helping scientists and future scientists collect and analyze data to create information and develop new statistical methodology (at a university statistics, mathematics, biostatistics, business, ecology, or psychology department)
- Mining data and applying business analytics to find patterns among huge amounts of data (at medium to large size corporations)

Job Characteristics

- Use data to solve problems in a wide variety of fields
- Apply mathematical and statistical knowledge to social, economic, medical, political and ecological problems
- Work individually and/or as part of an interdisciplinary team
- Travel to consult with other professionals or to attend conferences, seminars, and continuing education activities
- Advance the frontiers of statistics, mathematics, and probability through education and research

If you enjoy any of these, a career in statistics may be right for you!

What Fields Employ Statisticians?

One advantage of working in statistics is that you can combine your interest with almost any other field in science, technology, or business, such as:

- Agriculture
- Astronomy
- Biology
- Chemistry
- Computer Science
- Demography
- Ecology
- Economics
- Education
- Engineering

- Epidemiology
- Finance
- Forestry
- Genetics
- Health Science
- Insurance
- Law
- Manufacturing
- Marketing
- Medicine
- Pharmacology
- Physics
- Political Science
- Psychology
- Public Health
- Safety
- Sociology
- Sports
- Telecommunications
- Zoology

What Job Title Might I Have Other Than "Statistician"?

- Business Analyst
- Professor
- Economist
- Software Engineer
- Mathematician
- Risk Analyst
- Quality Analyst
- Investigator
- Environmental Scientist
- Pharmaceutical Engineer
- Researcher
- Data Analyst
- Project Manager
- Manager

Employment Outlook

Job opportunities in statistics are projected to remain favorable in the future. As the U.S. economy continues to produce jobs using quantitative literacy and analyses, increased numbers of statisticians are required.

The private sector needs statisticians in management, product quality, medicine, pharmaceutical research, medical device research, engineering, transportation, insurance, computer and data processing services, risk assessment, and marketing.

Government agencies employ statisticians to design, collect, analyze, and interpret data for planning and development services in agriculture, labor, education, and the census, among others.

Colleges and universities need statisticians for teaching, statistical research, and consulting.

Source: American Statistical Association

More information at http://www.amstat.org/

"I keep saying that the sexy job in the next 10 years will be statisticians"

Hal Varian,
Chief Economist, Google (2009)