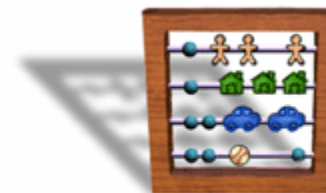


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Opportunities are Adding up for Statisticians



The Buzz

Are the chances of you becoming a statistician a million to one? You might want to reconsider. Statisticians' job prospects are adding up.

Recently the New York Times ran an article on the demand for statisticians. The article featured a quote from Hal Varian, chief economist at Google. "I keep saying that the sexy job in the next 10 years will be statisticians," says Varian. He goes on to add, "And I'm not kidding."

Keith Crank is the director for research and graduate education for the American Statistical Association (ASA). He agrees with the optimistic forecast. "The demand for statisticians will continue. Even in the current economy, statisticians find jobs."

What's behind this demand? New innovations in technology are one factor. Crank explains, "There are large amounts of data being collected and an understanding of statistics is needed to make sense of it. In addition, in some areas, such as medical research, statisticians and biostatisticians are required to run clinical trials and analyze the data that comes from them."

Computers have increased the range of statisticians' work. "Ever faster computer processing allows statisticians to analyze greater amounts of data much more quickly, and to gather and sort through large amounts of data that would not have been analyzed in the past," says the Occupational Outlook Handbook (OOH).

According to the OOH, "many jobs involve the analysis and interpretation of data from economics, biological science, psychology, computer software engineering, education, and other disciplines." In other words, all those fields could employ statisticians.

All this interesting research happening right now changes the stereotype that many of us might have of statisticians as number-crunching nerds working in dark basements and never seeing the light of day.

Just ask Sastry G. Pantula. He is the president-elect of the ASA and the head of the department of statistics at North Carolina State University. He gets excited when he describes how things are different now for statisticians:

"The most important change is that statisticians are now seen as integral members of the team from day one of any project, rather than as an afterthought, as in the past when they would be approached to analyze the data appropriately only because a journal editor asked them to do so, or a granting agency required them to have a statistician.

"They now are at the table when new problems are discussed, whether it is in drug discovery, manufacturing or business analytics."

Pantula's department has a t-shirt that features their logo and the motto Training Problem Solvers on the front. On the back, the shirt lists some professionals who need statisticians, from A to Z, including journalists, lawyers and nurses -- to name just a few.

How should teachers introduce the vast possibilities a career as a statistician can offer their students? Pantula says, "Kids have a natural curiosity to ask tough questions and to find new solutions to problems. We need to nurture it. Posing problems that have no clear or unique solutions at middle school or high school level would be

important."

The ASA has been actively advocating for statistical literacy, not only to increase the pipeline for future statisticians, but also to help develop critical thinkers for the future. Pantula explains which skills future statisticians will need: "Communication, computational, quantitative and analytical/critical thinking skills are essential to be a good statistician. Just being a good math whiz is not adequate to be a good statistician. Future statisticians need to build on their foundation in mathematics, computation and communication."

Jackie Camp, 22, has been studying a branch of statistics called actuarial science for the past five years. She chose her major after a friend of her mother's noticed she was good at math and suggested the career route of an actuary.

She points to the Society of Actuaries website when asked for a definition of what it means to be an actuary: "An actuary is a business professional who analyzes the financial consequences of risk. Actuaries use mathematics, statistics and financial theory to study uncertain future events, especially those of concern to insurance and pension programs. They evaluate the likelihood of those events, design creative ways to reduce the likelihood and decrease the impact of adverse events that actually do occur," explains the site.

When asked what reaction she gets when she describes what she studies, Camp says it varies from ending the conversation to speculation that she will make a lot of money.

"One of the big draws of this career for me is that actuaries often start working for very large worldwide firms, and there seem to be many possibilities for travel and working overseas."

Most colleges or universities have a math department if they don't have programs that specialize right away in statistics.

Camp advises: "Research the profession and job potential properly!! Also really research the schools to see where the best program is for what you want to do. Some schools have more well-known programs than others. It really helps to go to one that's well-known, and known for turning out good students as they will often have more employers visiting those schools for recruiting."

And it looks like someone who chooses the route of a statistician may have their pick of exciting career possibilities. As Pantula explains, "It is a 'bull market' for statisticians. It is a great time to be a statistician. Statisticians are playing an important role in drug discovery, genomics, crime scene investigation, homeland security, credit risk, climate change, energy, and improvement of quality, among others."

He adds, "The future looks good for statisticians in business analytics as well as in public policy making. Many government and academic statisticians are reaching their retirement age, and we need to continue to attract high quality students to our profession to fill these forthcoming positions."

Links

American Statistical Association (ASA)

The voice of statisticians in the U.S.

<http://www.amstat.org/careers/index.cfm>

Caucus for Women in Statistics

Working to raise female's interest in statistics

<http://caucusforwomeninstatistics.com/>

Society of Actuaries

Learn more about the work of actuaries

<http://www.soa.org/>