



DATA SCIENCE

» Data mining. Number crunching. Quantitative analytics. Call it what you want. We call it data science, and the College of Charleston is the first university in the U.S. to offer an undergraduate major (and minor) in this emerging field.

When Charlie Epps – the mathematical genius of television’s “Numb3rs” – uses algorithmic analyses to help the FBI fight criminals, that’s data science (DS) at work. When pro basketball teams cross-reference video of specific player movements with performance data to determine effective offensive or defensive strategies, that’s DS at work as well.

Rapidly evolving computer technology gives us the ability to gather and store vast amounts of information as data sets. Taking existing information and using it to produce new knowledge is what data science is all about. And because this data isn’t just numeric – it comes in the form of speech, text, video, graphics and music – DS can be a valuable tool in any industry with data for use as business intelligence.

Our program exposes you to different computer systems, programming languages (e.g. Python and SQL) and data mining tools. You’ll have access to outstanding facilities, including:

- » high-performance computers running both Windows and Linux,
- » a 148-processor distributed supercomputer cluster.

Couple those with talented professors who work on cutting-edge research and you’ve got a dynamic environment ripe with potential.

In one case, a business student created a new way to predict stock values based on the current values of related stocks. He was immediately hired by a national investment bank because of his expertise in putting computational thinking, mathematics, statistics, economics, psychology and sociology all into play. That’s DS at its best.

So, if you’re into breaking new ground, the DS minor offers tremendous potential for collaborative or independent research. Check out data science and see what the future might have in store for you.



Data science is a different slant on computer science. It's more of an application of principles than a technical pursuit like programming.

Being one of the first to get involved in data science at the undergraduate level makes it very interesting."

- Stacy Pullian '09