Data Analytics

Shepherd
UNIVERSITY

Concentrations

- Advanced Data Analytics
- Biology

About the Major

Data analytics is a deep, multifaceted subject with significant historical context, modern relevance, and future promise. Science, technology, business, crime, governance, recreation, and our private lives are all impacted by society's increasing capacity to generate, store, and transmit digital data. The objective of the Shepherd University data analytics program is to **develop students who have advanced capacity to derive knowledge from data and to communicate an understanding of that knowledge.** This includes skill in data collection, preparation, representation using mathematics, and storage and retrieval. It involves selection of and processing with appropriate methods, development and analysis of algorithms, and implementation in computer programming languages. It requires breadth of knowledge in many domains and depth of knowledge in a particular field. We expect graduates of our program to enjoy successful and productive careers whether they choose to attend graduate school, work in industry, contribute to research organizations, or follow entrepreneurial instincts.

Careers

The job market in data analytics is exceptionally strong. Here are some highlights:

- Fields include finance, engineering, science, business, medicine, energy, communication, law enforcement, marketing, and government.
- **Seven of the top 10 paying technical skills in 2015 were in data analytics** according to the Dice.com Salary Survey.
- Median 2014 salary for data engineers was $95,000.
- 2014-15: High technology salaries in Pittsburgh rose almost 17 percent.
- **Baltimore-Washington, D.C. region ranked third nationally in data analytics jobs.**
- West Virginia opportunities include: Federal Bureau of Investigation, National Oceanic and Atmospheric Administration (NOAA), NASA's Independent Verification and Validation (NASA IV&V), International Business Machines (IBM), Orbital ATK, Greenbank National Radio Astronomy Observatory, IRS, VA Hospital, and Procter & Gamble.

Get Involved

Data analytics pervades our daily lives. Here are ways to get involved in the field:

- Take **Introduction to Data Analytics (DATA 118)** in the fall to have an overview of the field.
- **Read the news.** Interesting developments in data analytics appear in the business, technology, and science sections almost daily.
- **Download and experiment with data analytics tools** such as the R environment for statistical computing (www.r-project.org), the Python programming language (www.python.org), and the Linux operating system (www.ubuntu.com).
- **Explore data analytics competitions** such as those hosted by Kaggle (www.kaggle.com), KDnuggets (www.kdnuggets.com), and DataDriven (www.drivendata.org).

Points of Pride

- **Rigorous and interesting curriculum** prepares students for the job market and graduate study.
- **First Bachelor of Science in data analytics in the state and one of the first regionally.**
- Dedicated laboratory for big data analytics and laboratory for genomic bioinformatics.
- Extensive industry and government data analytics experience of faculty in both concentrations.

Contact

For more information about the program, contact:
Dr. Ralph Wojtowicz
Associate Professor of Mathematics
Stutzman-Slonaker Hall 204C
rwojtowi@shepherd.edu

Visit:
www.shepherd.edu/data

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Office of Admissions
Ikenberry Hall 103
Shepherd University
P.O. Box 5000
301 North King Street
Shepherdstown, WV 25443-5000

304-876-5212

www.shepherd.edu/admissions