Data Analysis and Interpretation Specialization

Starts Feb 22. From $59 USD.

Enroll

Learn Data Science Fundamentals

Drive real world impact with a four-course introduction to data science.

About This Specialization

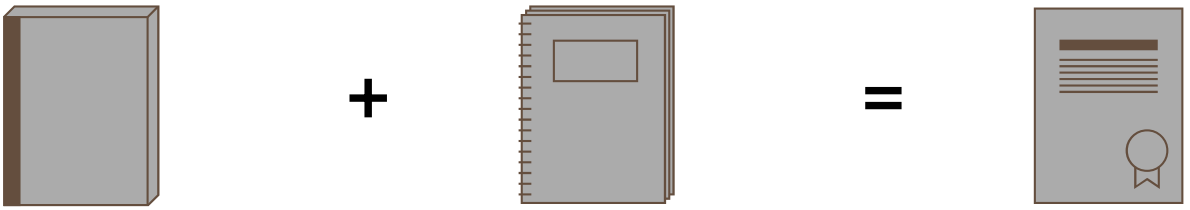
Learn SAS or Python programming, expand your knowledge of analytical methods and applications, and conduct original research to inform complex decisions.

The Data Analysis and Interpretation Specialization takes you from data novice to data expert in just four project-based courses. You will apply basic data science tools and techniques, including data management and visualization, modeling, and machine learning using your choice of either SAS or Python (including, but not limited to, the popular pandas and Scikit-learn python libraries). Throughout the Specialization, you will analyze a research question of your choice and summarize your insights. In the final Capstone Project, you will use real data to address an important issue in society, and report your findings in a professional-quality report. You will have the opportunity to work with our industry partner, DRIVENDATA, to help them solve some of the world's biggest social challenges by joining one of their competitions. Regular feedback from peers will provide you a chance to shape your question in new ways. This Specialization is designed to help you whether you are considering a career in data, work in a context where supervisors are looking to

you for guidance about using data, or you just have some burning questions you want to explore. No prior experience is required, but by the end you will have mastered analytical methods and applications to conduct original research that can inform complex decisions.

Created by: WESLEYAN UNIVERSITY

Industry Partners DRIVENDATA



4 Courses **Capstone Project** **Certificate**

Courses

Beginner Specialization. No prior experience required.

COURSE 1

Data Management and Visualization

Current session: Feb 22 — Mar 28

Commitment	**4 weeks of study, 4-5 hours/week**

About the Course

Whether being used to customize advertising to millions of website visitors or streamline

inventory ordering at a small restaurant, data is becoming more integral to success. Too often, we're not sure how use data to find answers to the questions that will make us more successful in what we do. In this course, you will discover what data is and think about what questions you have that can be answered by the data – even if you've never thought about data before. Based on existing data, you will learn to develop a research question, describe the variables and their relationships, calculate basic statistics, and present your results clearly. By the end of the course, you will be able to use powerful data analysis tools – either SAS or Python – to manage and visualize your data, including how to deal with missing data, variable groups, and graphs. Throughout the course, you will share your progress with others to gain valuable feedback, while also learning how your peers use data to answer their own questions.

› More Details

COURSE 2

Data Analysis Tools

Current session: Feb 22 — Mar 28

About the Course

In this course, you will develop and test hypotheses about your data. You will learn a variety of statistical tests, as well as strategies to know how to apply the appropriate one to your specific data and question. Using your choice of two powerful statistical software packages (SAS or Python), you will explore ANOVA, Chi-Square, and Pearson correlation analysis. This course will guide you through basic statistical principles to give you the tools to answer questions you have developed. Throughout the course, you will share your progress with others to gain valuable feedback and provide insight to other learners about their work.

› More Details

COURSE 3

Regression Modeling in Practice

Current session: Feb 26 — Apr 4

Commitment	**4 weeks, 4 - 5 hours per week**

About the Course

This course focuses on one of the most important tools in your data analysis arsenal: regression analysis. Using either SAS or Python, you will begin with linear regression and then learn how to adapt when two variables do not present a clear linear relationship. You will examine multiple predictors of your outcome and be able to identify confounding variables, which can tell a more compelling story about your results. You will learn the assumptions underlying regression analysis, how to interpret regression coefficients, and how to use regression diagnostic plots and other tools to evaluate the quality of your regression model. Throughout the course, you will share with others the regression models you have developed and the stories they tell you.

› More Details

COURSE 4

Machine Learning for Data Analysis

Current session: Feb 22 — Mar 28

About the Course

Are you interested in predicting future outcomes using your data? This course helps you do just that! Machine learning is the process of developing, testing, and applying predictive algorithms to achieve this goal. Make sure to familiarize yourself with course 3 of this specialization before diving into these machine learning concepts. Building on Course 3, which introduces students to integral supervised machine learning concepts, this course will provide an overview of many additional concepts, techniques, and algorithms in machine learning, from basic classification to decision trees and clustering. By completing this course, you will learn how to apply, test, and interpret machine learning algorithms as alternative methods for addressing your research questions.

› More Details

CAPSTONE PROJECT

Data Analysis and Interpretation Capstone

Starts March 28, 2016

About the Capstone Project

The Capstone project will allow you to continue to apply and refine the data analytic techniques learned from the previous courses in the Specialization to address an important issue in society. You will use real world data to complete a project with our industry and academic partners. For example, you can work with our industry partner, DRIVENDATA, to help them solve some of the world's biggest social challenges! DRIVENDATA at www.drivendata.org, is committed to bringing cutting-edge practices in data science and crowdsourcing to some of the world's biggest social challenges and the organizations taking them on. A major component of the Capstone project is for you to be able to choose the information from your analyses that best conveys results and implications, and to tell a compelling story with this information. By the end of the course, you will have a professional quality report of your findings that can be shown to colleagues and potential employers to demonstrate the skills you learned by completing the Specialization.

Pricing

Total Price to Enroll **$265 USD**

Includes

1 Data Management and Visualization	**$59 USD**
2 Data Analysis Tools	**$59 USD**
3 Regression Modeling in Practice	**$59 USD**
4 Machine Learning for Data Analysis	**$59 USD**
5 Data Analysis and Interpretation Capstone	**$59 USD**

Payment Options

Pre-Pay

Purchase all courses in a bundle and save 10%.

Pay Per Course

Purchase each course individually, whenever you are ready.

Creators

Wesleyan University is dedicated to providing an education in the liberal arts that is characterized by boldness, rigor, and practical idealism.

Lisa Dierker
Professor

Jen Rose
Research Professor

FAQs

- What is the Capstone Project?
- What is the refund policy?
- Can I just enroll in a single course? I'm not interested in the entire Specialization.
- Is financial aid available?
- Can I take the Specialization for free?

- How long does it take to complete the Data Analysis and Interpretation Specialization?
- How often is each course in the Specialization offered?
- Do I need to take the courses in a specific order?
- Will I earn university credit for completing the Data Analysis and Interpretation Specialization?
- What will I be able to do upon completing the Data Analysis and Interpretation Specialization?
- What software will I need to complete the assignments?
- What background knowledge is necessary?

More questions? Visit the Learner Help Center (https://learner.coursera.help/).

(/)

Coursera provides universal access to the world's best education, partnering with top universities and organizations to offer courses online.

Download on the App Store (https://itunes.apple.com/app/apple-store/id736535961?pt=2334150&ct=Coursera%20Web%20Promo%20Banner&mt=8)

GET IT ON Google play (http://play.google.com/store/apps/details?id=org.coursera.android)

COMPANY

About (/about/)

People (/about/people)

Leadership (/about/leadership)

FRIENDS

Partners (/about/partners)

Companies (https://enterprise.coursera.org)

Programs (/about/programs)