Description

In this three-credit, 15-week online graduate course, work with an instructor mentor to develop a big data inquiry model for a complex business issue, question or problem of your choice. Over the semester, frame the question, develop a hypothesis, collect and prepare data for analysis, perform the analysis, and present actionable recommendations for your organization.

Projects

Milestone 1: Formulating and Approving your Project Plan
Propose a problem, question, or issue to explore within your organization. Use analytic methodology to describe the scope of work to be completed.

Milestone 2: Gathering and Exploring Data
Collect relevant data, then perform an Exploratory Data Analysis using Python (with a Jupyter Notebook).

Milestone 3: Preparing Data and Feature Engineering
Prepare data for analysis, performing variable significance analysis and employ Feature Engineering techniques to address variances.

Milestone 4: Model Development and Formal Analysis
Design and develop at least two predictive performance models using different analysis techniques and algorithms.

Milestone 5: Final Presentation
Present the completed project proposal, including an Excel or Jupyter notebook, dataset description, formal analysis, findings, and recommendations.

Outcomes

Completion of the course enables you to:

- Develop a big data inquiry model for an issue, question or problem
- Collect and prepare data for analysis, perform the analysis, and present actionable results back to the organization
- Communicate with purpose and clarity in written and oral formats
- Assemble and prepare data from multiple sources that informs analysis in a sound and logical manner
- Use data to provide insights to business questions and influence decisions

Technology

This course is offered through the RensselaerStudio, providing ease of access to all course technologies and software required, any time, anywhere. Live, synchronous sessions are held every 2 – 3 weeks via Zoom.

Features

Live, online synchronous sessions are scheduled every 2-3 weeks throughout the semester with the instructor and professionals from various industries also participating in this course. Sessions are designed to cultivate your understanding of course concepts and guide your approach as you gain insights from others’ experience.