ENGR 6200
Data-Driven Decision Making

DESCRIPTION

In this three-credit, 15-week online graduate course, employ analytic models using simple and multivariate methodologies to validate results and develop recommendations for a new product offering. Across four projects, use data wrangling and preparation methods to formulate your analysis. Then, scope and frame questions so that informed decisions can be made.

PROJECTS

Project 1
Given a scenario and challenge, employ a Rensselaer Analytic Approach to craft hypotheses to determine if a new product should be pursued by the company. Then, develop a logic chain to determine the best approach while considering independent and dependent variables in the process.

Project 2
Engage in data preparation techniques to clean your data, then calculate descriptive statistics for each variable. Explore insights using data visualization to show causality and correlation, as well as collinearity and covariance.

Project 3
Continuing to work under the guise of this scenario, leverage the data you have prepared, to make specific and defensible recommendations about whether the product should be pursued.

Project 4
Use data and regression techniques to predict who may buy the product, then prepare a comprehensive presentation on the product’s viability for the CEO.

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.

OUTCOMES

Completion of the course enables you to:

- Employ exploratory approaches to data inquiry
- Demonstrate the use of data in an analytic framework
- Utilize data management techniques to assemble and clean data
- Use regression methods to determine variable relationships
- Use statistical validation tools to evaluate the explanatory power of results
- Use analytic outputs to make predictions and forecasts
- Create a business proposal that demonstrates actionable insights

TECHNOLOGY

This course is offered through the RensselaerStudio, providing ease of access to all course technologies and software required, any time, anywhere. Synchronous sessions are held via Zoom.

Have questions about the course? Schedule a time to chat with Rensselaer