ENGR 6215
Business Intelligence Analysis

Description
In this three-credit, 15-week online graduate course, use analytical tools to gain deeper insights into complex business issues. Apply a Rensselaer Analytic Approach to real-world business considerations including customer analysis, competitive analysis, financial forecasting, customer decision models, and organizational performance dashboards. Tune models to represent the current state and adjust these models to represent the desired future state as underlying assumptions change.

Projects
Over four projects, apply a Rensselaer Analytic Approach to explore and recommend potential growth opportunities for a restaurant group in order to understand and apply useful analytical frameworks.

Project 1: Hypothesize an Analytical Approach to a Business Problem
Prepare a scoping document and hypothesize an approach to determine potential new locations for a restaurant chain, leveraging data about the current state of the restaurant industry and developing a strong logic chain.

Project 2: Evaluate Data to Tune a Model
Evaluate the current state of the chain’s performance by analyzing survey and operating data. Establish which criteria are relevant to the success of existing and potential locations.

Project 3: Predict Successful Locations
Using the Random Forest methodology, evaluate potential locations that meet specific performance criteria, choosing a set of locations that can meet specific requirements.

Project 4: Forecast/Predict, Prescribe, Set Performance Metrics
Use prediction techniques to forecast sales for a 30-day period. Apply Monte Carlo simulation to obtain a distribution of the Net Present Value (NPV) of capital investment. Conclude by presenting your recommendations to your instructor mentor, who will represent the organization’s Board of Directors.

Outcomes
Completion of the course enables you to:
- Demonstrate the use of data in a complex analytic framework to evaluate and respond, in context, to a business problem or question
- Communicate with purpose and clarity to a leadership audience
- Assemble and prepare data from multiple sources that informs analysis in a sound and logical manner
- Analyze business data to discover relationships and deliver insights to inform a business decision

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.

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.

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