ISM6136 – Final Group Project

In the final ISM6136 project, you will work as a team to develop a predictive model. For this project, you will identify a dataset and focus on a business problem or issue for which a predictive model would be beneficial. The project is not just about code; it's about developing a comprehensive analysis and report using Jupyter Lab notebooks.

Details:

- The final project is a group project. You will work within your current teams.
- The total points allocated to this project are 25% of your grade.
- Individual grades will be calculated based on the total team score multiplied by the percentage of peer evaluation you receive from fellow team members. For instance, if your team received a total score of 100 percent for the project, and your peers evaluate your team contribution at 9 out of 10, your score for the group project will be 90% points.
- Peer evaluations will be sent to team members after the final presentation. You will have three days to submit your peer evaluations. Instructions on how to complete this evaluation will be included in the email invitation. Anyone who does not submit a peer evaluation will receive an automatic peer evaluation of 70% or the received evaluation score, whichever is lower.

Deliverables:

Deliverable 1 (10% of project mark): <see canvas for deadline>

Submit to canvas a PowerPoint or MS Word document. This document should define your business question and provide details on the data you will analyze and the analysis you plan to conduct. The professor will review your submission and provide feedback. The data you select must be unique and not already claimed by other teams – so check with your professor first to see if another team hasn't already selected the data you're considering.

Deliverable 2 (70% of project mark): <see canvas for deadline>

Submit your Jupyter Lab notebook, data, and the team's final PowerPoint presentation. The quality of this work has the highest impact on your mark.

Deliverable 3 (20% of project mark): Five-minute final presentation: <see canvas for date>

Your team will present your project to your professor. The presentation must be at least 5 minutes and a maximum of 7 minutes. You can present up to 7 minutes. After your presentation, there will be a brief question period. All team members must be present in front of the class. Not all team members need to speak, but it's best if more do.

Use the following as a guiding presentation structure:

1) Introduce team
2) Introduce business problem(s) and motivation
3) Describe what, if anything, others have done in the past concerning solving this problem.
4) Describe the opportunity(ies) available in using business analytics (this should "motivate" your question and project).
5) Describe your approach to addressing this problem
    a. Data used/found/derived
    b. Models chosen to apply and test
6) Describe results (detailing the process)
7) Conclude with recommendations (supported by your analysis).

Rubric for deliverable 2 (document submissions)

- 10% - Overall professionalism and quality of material submitted.
    - Analysis is well-documented
        - Use markdown!
    - Quality presentation
    - Work is well written – free of typos, formatting errors, and issues
- 10% – Clarity of objectives and motivation
    - Problem clearly defined
    - Problem properly motivated (make us care about this).
    - Objectives defined/understood/communicated
- 50% – quality of core analysis
    - The structure/approach of the analysis was made clear
    - The model(s) used were sufficient to address the problem
    - The data was sufficient to answer the question.
    - Selection of appropriate and justified metrics to evaluate models.
    - Good use of Markdown to document your analysis.
    - All analyses included in the document must reinforce the objective.
        - I've noticed some teams take a 'kitchen sink' approach – that is, they have added in as many graphs and charts and calculated many metrics -but much of this didn't add to the overall objective of the assignment. Adding random graphs and analyses that don't support the overall analysis and objective will hurt your marks.
- 20% - demonstration of knowledge of material covered in class
    - Utilize course content and demonstrate knowledge of the material covered.
    - Demonstration of understanding of the material.
- 10% – Discussion of findings and results
    - Evaluation of model performance relative to the problem
    - Identify recommendations on how the recommended model can be used
    - Add any "qualifications" surrounding the recommendations made
    - Revisit and conclude with the initial business problem and initial question.