Objective:

To demonstrate within the context of a ‘real world’ problem the skills and insights gained within CIS 8005. Demonstrate the ability to identify and translate relevant data and insight into an actionable ‘recommendation’. Gain experience and understanding regarding challenges and potential obstacles that will exist within any meaningful and relevant data analysis effort.

Evaluation criteria:

1. Identification of relevant data sets. Numerous options exist including various online options (i.e. Kaggle and various news and industry organizations) as well team observations and data gathering. The quality and richness of data selected will be an evaluation criteria. Multiple data sets can add significant richness to your problem and analysis.
2. Cleansing and data transformation. Demonstration of insight and use of technical toolsets introduced within the course provide a means to demonstrate a working knowledge of key concepts will be an evaluation criteria. It is expected that some level of data cleansing and transformation will be required.
3. Pattern discovery – what insights does your investigation and transformation of the data provide to your team? Within the context of the patterns observed, what tools/techniques appear to be appropriate to apply? The richness of data sets selected will allow teams to differentiate their knowledge and understanding of the material covered and tools introduced.
4. Visualization – visualization can add to your insight regarding the problem being addressed, help determine potential data transformations and serve as a key means of communication insights and your final recommendation(s).
5. Predictive modeling – within the context of your analysis you should utilize at minimum one predictive modeling technique covered within your analysis and final recommendations. Use of multiple modeling approaches will allow teams to demonstrate broad understanding.

Expected time commitment:

It is expected that teams will work in tandem as well as individually once the problem set is well understood. Division of labor is expected and mirrors real world challenges. However, within the division of labor it is expected that each team member will not only have a solid understanding of the team’s ‘problem’, approach and recommendation but will also have a working knowledge of the tasks they were not directly involved. It is expected that each team member will spend at minimum 30 hours on the project.

Presentation:

A short presentation will be required to cover your analysis and recommendations. Your presentation should focus on 1) introduction of your selected problem 2) demonstration of the analysis and use of tools/skill gained within the course. Your recommendation should be as compelling as possible. Each team member should be expected to answer questions regarding the full breadth of the problem, analysis and recommendations. Evaluation will be on the quality and depth of your analysis, not the ‘polish’ of your presentation skills.