**CIS 575 – Project Proposal and Project Requirements**

**You can complete the project individually or as two- or three-person teams. If you decide to work as a team, only one member of the team has to submit a required deliverable. Please mention the team members on the front page of the proposal submission.**

**Part 1 - Proposal and Sample Cases**

1. Submit a proposal (no more than three pages), that includes
   * a brief description of the problem/opportunity
   * specific business objective(s) of your analysis
   * a brief explanation of the predictive modeling task(s) ( should be a predictive modeling - classification task )
   * potential dataset(s) that you plan to use and their sources
   * approximate number of cases in your dataset ( should have >= 800 observations )
   * approximate number of cases you plan to use for i) training and ii) validation
   * potential target/response/dependent variable(s) ( should be a binary class variable )
   * potential predictor/explanatory/independent variables ( should have >= 5 variables )
   * data mining techniques (i.e., decision tree, logistic regression, neural network) that you are considering for the analysis
   * data mining software (i.e., KNIME, R, Python, Matlab, Stata, SAS, etc.) that you are considering for the analysis
   * Team members’ names (if you will be completing the project as a team)

**Note:** Your proposal should explicitly address each requirement listed above. Predictive modeling is required for the project. Do not submit a proposal that includes only descriptive and exploratory analysis.

1. Submit an Excel or CSV file containing a sample of 50 to 100 cases (with appropriate column headers) from your dataset.

If you plan to use a competition or dataset from Kaggle (or, any other source) for your project, include the link (i.e., URL) to the competition/dataset. Repeating verbatim the text from a competition is plagiarism. Write the proposal in your own words.

I will either accept your proposal as submitted or suggest modifications before final approval.

You cannot change team membership after the project proposal has been submitted and approved. However, you have the option of leaving a team (with my approval) and completing the project individually.

By default, all members of a team will receive the same grade for the project. However, this may change based on peer evaluations that each team member is **required to complete.** A sample peer evaluation form is posted on Canvas.

**This is due towards the middle of October. Please check canvas for exact dates.**

**Part 2 - Final Report**

Submit a written report (8 to 20 pages excluding appendices) that includes the following:

* executive summary of project
* business problem/opportunity (from proposal)
* specific business objective(s) (from proposal)
* process followed for selecting and gathering data
* discussion of preliminary data exploration and findings
* description of data preparation - repairs, replacements, reductions, partitions, derivations, transformations and variable clustering
* description of data modeling/analyses and assessments
* explanation of model comparisons and model selection
* conclusions and recommendations (i.e., what did you learn from the analysis; did you meet your stated business objective(s); how can the results of your analysis address the business problem/opportunity; what further analyses, that builds on your work, can be in done in the future)

Relevant output from your analyses should be included in the Appendix and referenced in the body of your report.

**This is due towards the end of the semester. Please check canvas for the exact dates.**