ENG6600, F25, Project Proposal

Each group in this course is expected to submit a proposal on the project they will pursue and complete for the ENG6600 "Machine Learning with Applications" course. The following points are guidelines to what you may want to include in your proposal.

1) **Problem statement**: Introduce in simple words a description of the project you wish to pursue and propose in this course.
   a. Describe in detail the problem in hand and the motivation behind the project.
   b. Objective of the project:
      i. Define your project and explain the main objectives of the project.
   c. Is it a supervised or unsupervised based ML problem?
   d. If supervised, is it regression or classification?
   e. Does this project relate to any previous work you have done in other courses.
   f. Does this project relate to your thesis or M.ENG/MASc/PhD degree.

2) **Data set to be used**.
   a. Brief description of the dataset and features if applicable.
   b. The size of the dataset.
   c. The source of the dataset.
   d. Link to the dataset if applicable.
   e. Any previous solutions attempted by other researchers.

3) **The main contributions of the project.**
   a. Do you expect any contributions that may advance the state of the art?
   b. What is new?
   c. Are you trying to reproduce results you read in a paper?

4) **The overall methodology (approach) you will be using in this project:**
   a. Data Exploration?
   b. Data Preparation?
   c. Feature Selection?
   d. What are the different ML techniques you will be using in the project? Why?

5) **Results:**
   a. What type of results do you expect to include in your final report?
   b. If you do not know, then simply state the metrics based on the nature of the problem you will be solving (Classification vs. Regression).
   c. What type of analysis will you cover in the final report?

6) **Timeline:**
   a. What will be completed on week 9-11
   b. What will be completed on week 12-13