

# DS 4400: Machine Learning and Data Mining I

Spring 2022

## Project Milestone Template

Project Title: FILL IN

TA: FILL IN

Team Members: FILL IN

**Instructions:** Please include your TA in the header and also the project members. Please report your progress on the project using the following template (it is fine if you decide to add some sections or reorganize, but we would like you to cover the items below in the milestone report).

Remember that it is not acceptable to reuse code from online sources, but it is fine to read a tutorial, a blog, or an article, and experiment with a similar method in your project.

The milestone itself will not be graded, but you can use the text you write for the milestone for the final project report (which will have a very similar template). Plan for the milestone to be around 4 pages. The instructors will provide feedback on the project milestone. We expect that by the milestone you train at least 1 or 2 models and get some preliminary results. If that is not the case, then please explain your challenges and your plan to address them.

### Problem Description

- What is the machine learning problem you are trying to solve?
- Is it a classification or regression problem?
- Why is it important? Describe the motivation
- Describe several references you read on the topic. It could be academic papers, blogs, tutorials, etc. You are probably not the first to think about this problem, so it would be good to learn what is some related work in this space.

## Dataset

- Provide dataset statistics (number of records, classes, number of features, feature types, missing data or not, etc.)
- Feature definition and some insights
- Exploratory data analysis – include some graphs to explore the data

## Approach and methodology

- Describe your general approach to solving this problem
- This could include for example: feature selection, normalization, defining new features
- Machine learning models
  - Did you try training any models?
  - If yes, report preliminary results/metrics.
  - If not, report challenges and plan on how to address them.
- Challenges you encountered and changes from the proposal

## Remaining work

- Lay out your plan to finalize the project

## Team member contribution

- For each team member, specify what items they worked on and what they plan to work on.