

# Final Project Proposal

## Instructions

### Overview of the Final Project

The Final project is an individual assignment in which you are expected to do the following:

1. Select a dataset:
  - a. This should be a publicly available dataset that is suitable for supervised machine learning.
  - b. The data volume of the dataset should be consistent with cloud machine learning capabilities – approximately 30,000 instances (rows).
  
2. Formulate a research question:
  - a. The question must be answerable by having the model predict either continuous values (regression) or classes (classification).
  - b. Questions that are answerable using descriptive statistics do not qualify.
  
3. Identify relevant published research papers:
  - a. Papers should help you identify appropriate supervised machine learning algorithms for use in your model.
  - b. Papers should help you identify metrics for deciding if your model produces significant results.
  
4. Using the cloud resources provided, develop a supervised machine learning model using the techniques presented in the course including:
  - a. Data preprocessing
  - b. Pipeline building using Jupyter Notebooks
  - c. Feature engineering
  - d. Model training, testing, and evaluation
  - e. Dimensionality reduction and model tuning

## **Overview of the Final Project Proposal**

The Final Project Proposal is a planning document to help you organize your work. Feedback on this document from the instructor and the TA should help you further focus your efforts going forward.

## **Tools**

The Final Project Proposal is a word processing document. You may use any word processor. Please convert your document to PDF before submitting.

## **Starter Files**

A template file has been provided in the Weekly Schedule that you may download:

- IS597MLC\_FinalProject\_Proposal\_Template.docx

## **Assignment Details**

Please follow the detailed instructions provided in the template file as you transform the template into your Final Project Proposal.

## **Deliverables**

Please submit 1 PDF file to the Canvas submission activity using the file naming conventions described below.

## **Naming the Submission File**

Name your file using the following scheme:

surname\_givenname\_final\_project\_proposal.pdf

If this were my own submission, I would name the file as follows:

trainor\_kevin\_final\_project\_proposal.pdf

## **Due By**

Please submit this assignment by the date and time shown in the Weekly Schedule.

Last Revised

2024-09-29