Descriptive Title

YOUR NAME

November 6, 2023

Abstract

The abstract should provide a high-level summary of the work to be done for the final project (i.e., any student that has taken this class should be able to read). This summary should include some basic information about the data set to be analyzed, the analysis methods that will be employed, and the expected output from the analysis (that's 3 things so the abstract should probably be at least 3 sentences long). To remove this description either delete this paragraph or add a % to comment out this text.

1 Data

*Describe the data set that will be analyzed for the final project. Useful information to include in this description includes: (i) the origin of the data (e.g., did you download data about stars from an online database or did you conduct measurements in a lab or did you find some simulated data), (ii) the "nature" of the data (e.g., do you have a bunch of measurements of inputs and outputs [what we call x vs. y in class], do you have measurements pulled from some 10D space, do you have a lot of categorical information), (iii) the size of the data set (**be precise**, if you have measurements for 1541 sources say that, do not write $\sim$1500 or gtrsim1500), and finally, (iv) a brief statement about why the data are important (e.g., we can use these measurements to estimate the mass of the neutrino, we can use these measurements to determine the return on investment for solar cell projects, etc). To remove this description either delete this paragraph or add a % to comment out this text.*

2 Proposed Analysis

*This is the most important part of the project proposal. Describe in detail the analysis that you are planning to perform (e.g., I will build and implement a reverse jump markov chain monte carlo algorithm in order to select between different possible models to explain the number of electrons detected as a function of input voltage. NOTE - do not actually do this project). As a reminder, it is **essential** that your final project rise above the level of the work done on problem sets (e.g., fitting a line $mx + b$ to data via least squares is something we have done on many problem sets. This is not sufficient for the final project. Fitting a line to $\sim$1000 different data sets is also insufficient. The analysis should be more complex.) Please provide as many details as you are able. You will receive feedback regarding the scope of the proposed project - if the scale is too small you'll be asked to expand, if the scale seems too broad/complex (e.g., the reverse jump MCMC described above) you'll be asked to descope the potential work. To remove this description either delete this paragraph or add a % to comment out this text.*