

*Instructions:* Please put all answers in a single PDF with your name and NetID and upload to SAKAI before class on the due date. If you look at any references (even wikipedia), cite them.

**Problem 1***Project progress*

Summarize your data, describing the problem you are attempting to solve (e.g., prediction, classification). Describe the features that you will use from your data to solve this problem. Present your mathematical model in a rigorous and clear way with equations when necessary. Please specify the random variables and parameters in your model (for example,  $x_i \in \mathbb{R}$  are real-valued and  $y_j$  are categorical variables), and provide interpretations for these variables (i.e., which are observed, which are hidden, and which you will be estimating, and how each of the observed values will be processed from the original data). In three sentences, describe the inference problem and what methods you will use for this task.

This work should be approximately 1-2 pages in TeX, and this text can be used directly in your project report. Please feel free to use the final project report TeX template to write this homework up.