Assignment 1

1. The dataset that you need is in one of the sheets of the Excel file [Assignment\_1\_Data\_and\_Template.xlsxPreview the document](https://classroom.ucsc-extension.edu/courses/3126/files/643343/download?verifier=odIIyJEo3LiR3qbGulQVe5nY5dRNEwWgKzK4zqJb&wrap=1). The other sheets contain shaded cells meant to be filled in by you. Examine the sheets carefully and understand what must be computed or described. Except for filling in your results in the specific cells provided, do not alter the spreadsheet in any other way. This is the only recognized means of submitting this assignment. See NOTE below.
2. Construct separate histograms for male and female heights using 32 bins. **Do not use a built-in histogram program.** Also, remember that the histograms are the lists of 32 counts that you enter into the correct place in the spreadsheet. They are not just pretty pictures!
3. Based on the histograms, compute the class label (gender) and the corresponding posterior probability of individuals with heights 55, 60, 65, 70, 75 and 80 inches
4. Find the parameters of Gaussian models for the 2 PDFs to describe the data. **You may use built-in functions to compute the model parameters.**
5. Use the Bayesian Formula with the model parameters found above to re-compute the class label (gender) and the corresponding posterior probability of individuals with heights 55, 60, 65, 70, 75 and 80 inches. **Do not use a built-in function for computing the pdf.**
6. Repeat steps 2 through 5 using just the first 50 height entries in the data file. Now, what are your observations regarding histogram classifiers and Bayesian classifiers?