

CEG-7570 Project

Part III – Feature Selection Using Recognizers

In Part I of the project one feature was selected from a data set by the FDR class separability measure, and in Part II, the selected feature was used to train a 1-D Bayesian classifier. In Part III, we will reselect a feature in each data set using recognizers. For each feature, we will first train a classifier using that feature using the training data set, and then evaluate it using the test data set. We will find the recognition rate for each feature and select the feature that produces the highest recognition rate.

Note that since there is no longer a requirement to have the same number of points in each class, if class k in a data set contains n_k points, we will move $n_k/2$ points in that class to the Training data set and the remaining points to the Test data set.

After selecting the best feature using recognizers, compare the recognition rates obtained by Parts II and III? Explain the reason for any differences between the two methods in your report.

Part III of the project is worth **9 points**.

Final Report: Summarize your results for Parts I, II, and III in a report and submit it as the final report. Although program implementation may be done together with a classmate, all reports should be written individually. The report is worth **20 points**.

Project implementation (Parts I, II, and III) as well as the final report are due April 17, 2018, 3:30 PM.