ENGR 421 – HW1 – Report

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Implementation:

I used MASS library to generate random data points according to given parameters.

Graphical user interface, application

Description automatically generated

Left is the result from sample\_means.

Graphical user interface, application

Description automatically generated

Left is the result from sample\_covariances.

Graphical user interface, application

Description automatically generated

Left is the result from class\_priors.

Graphical user interface, application

Description automatically generated

After that I used score function that we implemented in class and then posterior probability that we implemented in LAB to draw the lines. In the left my data points with decision boundaries are shown. Misclassified data points are marked with purple circles.

Graphical user interface, application

Description automatically generated

Last, I evaluated every point’s coordinates according to the lines and made a table for each of them. Then I checked if the points are below the lines or above it. Last, I put them in a confusion matrix and in the left the result of confusionMatrix is shown.

However, because of my poor implementation sometimes the confusion matrix miss some data points.