Project 4

Due on Thursday, March 13 in class

Your written report should be addressed to Dr. Steven Vamosi, a botanist at University of Calgary

Using all the relevant materials we have covered in the class to prepare this report. As **minimum requirements**, your report **must include**

1. Define the goal
2. Describe in details the measurement process
3. Carry out the data creation process
4. Develop the classification procedure
5. Classify the training data points (reporting your classification errors, if any)
6. Classify new leaves with measurements (width and length in mm) u = (32, 82), v = (38, 52) and w = (40, 76).
7. Show that the observation space is partitioned into two distinct regions by a straight line under your classification rule.
8. Develop a classification rule for the case where you cannot assume the two species share the same covariance matrix. What does your new rule look like geometrically (compared with the result in item 7)?
9. Give a presentation of your classification procedure(s) in the class; **be ready to classify any pair of measurements given to you** during your presentation.