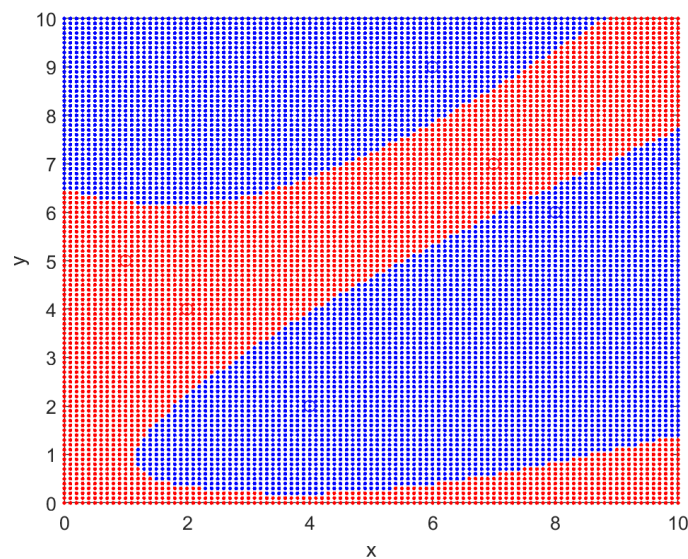# MTRE4490 Machine Learning for Robot Perception

Project #4

Due by 11:59 pm on 02/24/20 (Monday)

In this project, you are required to develop a Python program with the keras and tensorflow packages to implement a neural network to classify the data points in a 2D region (0<x<10 and 0<y<10) into two groups , as shown below:

In particular, the training samples are below:

(1) The coordinates of the red dots: (1, 5); (2, 4); (7, 7); (4,6); (6,4)
(2) The coordinate of the blue dots: (6, 9); (4, 2); (8, 6); (5, 5); (3, 8)

The project requirements are below:

1. In the first line of the Python code, use a comment line to show all group members' names.
2. Each group saves your Python code as "classification_region.py", and uploads it to the D2L drop box.

Grading Rubric
10 points: The Python code submitted correctly.
30 points: Code runs without any syntax errors.
20 points: The classification result is shown as a picture similar to the one above.
40 points: The classification result (boundary) is successful.