**Lab Assignment 5**

**Machine Learning (UML501)**

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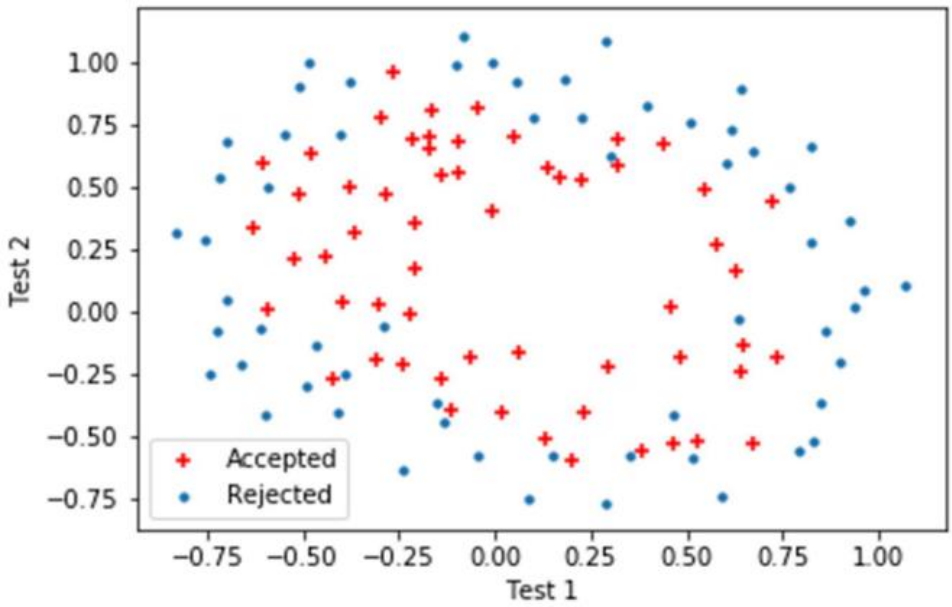
| Q 1 | Multiclass Logistic Regression Implement Multiclass Logistic Regression (step-by-step) on Iris dataset using one vs. rest strategy? |
| Q 2 | Ridge Logistic Regression Download the exam dataset from the following link: https://drive.google.com/file/d/1wH6ofvNGPmORFlCLt72WGhJYPZiXstYh/view?usp=sharing<br>The dataset labels that whether or not the student will get admission on the basis of the two exam scores. The plot of the data against exam1 and exam2<br>  <br><br>As clear from the figure, a linear decision boundary does not fit well. So, fit a Logistic Regression Classifier with polynomial function of test1 and test2 scores upto degree 6 using<br>i. Step-by-Step Logistic Regression (with no regularization; alpha=10; number of iterations=1000)<br>ii. Step-by-Step Logistic Regression (with ridge regularization; alpha=10; number of iterations=1000; lambda=0.2) |