

## Pattern Recognition Techniques

### Lab-Exercise-5: Learning Vector Quantization (LVQ)

#### Instructions:

1. Learn the basics of LVQ and its Implementation procedures / Algorithms from Online resources.
2. Implement simple LVQ with any Dataset of your choice using any of the Language and Post the Code and Output screen shots in a Document file
3. Do not Copy the entire code from online source, advisable to modify or write your own code

#### Some Online Resources are given below:

Basics of LVQ:

<http://ccy.dd.ncu.edu.tw/~chen/course/Neural/ch4/index.htm>

Python Implementation:

<https://www.geeksforgeeks.org/learning-vector-quantization/>

Python Implementation

<https://machinelearningmastery.com/learning-vector-quantization-for-machine-learning/>

MATLAB Implementation

<https://www.mathworks.com/help/deeplearning/ug/learning-vector-quantization-lvq-neural-networks-1.html>

R Implementation

<https://www.datatechnotes.com/2018/10/learning-vector-quantization.html>

Java Implementation

<https://gist.github.com/stes/1519645>

#### Implementation

LVQ was implemented on the same dataset as the previous exercise i.e., Iris Dataset.

Comparison was implemented with K – NN and Random Forest Classifier