

Final Project

MA4207

The final project for MA4207 involves network analysis and pattern classification of 2 given datasets. The project is divided into 2 components: a) Machine Learning and b) Network.

- a) The data provided is divided into training and test sets and suffers from small sample size problem. You will design a pattern classification technique of your choice (not covered in class) that will classify the data with high accuracy. Achievable accuracy for given datasets are provided below. Your classifier's performance should ideally be close to the benchmark performance provided for respective datasets. You will also try to find and visualize the discriminatory regions (features) that contribute towards the classification.
- b) The given data is from two different classes. Take training data and test data of the two classes together and construct the network. Now do the following: (I) Analyse the network to retrieve meaningful information. (II) Cluster the unsupervised network nodes and correlate with the original classes to see how closely the clustered groups match the original class.

Dataset 1

<https://www.timeseriesclassification.com/description.php?Dataset=MotorImagery>

Dataset 2

<https://www.timeseriesclassification.com/description.php?Dataset=Earthquakes>