Project No.	Project Title	Date of presentation	Project Summary	Implementation Details	Dataset link	Referee	Group Members
001	Active learning and clustering-classification based face position detection using SOM and RBF	April 10, 2018	Images sequences of subjects while driving in real scenarios are given. It is acquired over different days from 4 drivers (2 women and 2 men) with several facial features like glasses and beard. Find out clusters according to whether the driver is looking right, front or looking left using a RBF classifier.	Do not use the labels given in the dataset. Implement clustering with SOM and calculate effectiveness in proper grouping the given images according to the face postures of the drivers (i.e. looking right, front or looking left). At last train a RBF classifier using selected labelled samples from each cluster and find out the class label of the others. (Show your result by varying the number of collected samples as 25, 50, 75,…)	Click here	Shounak	Aparna, Palak
002	Image segmentation using K-means clustering	April 9, 2018	Use of K-means clustering for image segmentation	Use K-means clustering to group an image. Identify the image portion with the main object (flights)	Airplane images from Merced data click here	Shounak	Sandeep, Mohit
003	Hierarchical clustering technique for image segmentation	April 5, 2018	Use of any hierarchical clustering technique for image segmentation	Use hierarchical clustering to group an image. Identify the image portion with the main object (houses)	Sparse residential images from Merced data click	Shounak	Dharmendra, Shoaib

					here		
004	Performance Comparison of PCA and auto-encoder NN for feature reduction	April 5, 2018	Use PCA and auto-encoder NN for feature reduction and compare performance	The comparison in the reduced feature space should be done using MLP	Click here	Shounak	Ritvik, Suyog
005	Solution of symboling problem using regression	April 5, 2018	The second rating corresponds to the degree to which the auto is more risky than its price indicates. Cars are initially assigned a risk factor symbol associated with its price. Identify the risk factor associated with each car in the dataset.	Polynomial Curve fitting using any regression method	Click here	Shounak	Abhivandit, Kedarnath
006	Performance evaluation of linear and non-linear SVM kernels in multi-class classification	April 9, 2018	Compare the performance of a linear SVM kernel and non-linear SVM kernel in multi-class classification problem	Compare in Iris data set where the number of classes is 3	Click here	Shounak	Rahul, Rohan
007	Clustering schemes in text categorization	April 9, 2018	Comparing efficiencies of k nearest neighbour,		Click here	Shounak	Nilotpola, Jayashree

			k-means clustering algorithms in text categorization				
008	Comparing the performance of ANN based classifiers in stock monitoring	April 10, 2018	Find out which one among the MLP, and RBF classifiers gives the best accuracy in predicting the stocks which yield highest annual return	Compare accuracies in predicting the **highest annual return**.	Click here	Shounak	Anand, Aman
009	Classification of Breast Cancer using MLP	April 10, 2018	Use MLP to classify malignant and benign tumors	Use all 30 features from the dataset to do the classification.	Click Here	Indrajit	Piyush, Ravi Varma
010	Object classification using MLP	April 12, 2018	You will be given few RGB images with multiple objects in each image. Extract features from each image and train a NN model using MLP.	In each image you will get multiple objects. You need to select features for each object and train the MLP. After that the model will be use to test new image and finally you need to generate the object classification map.	Dataset will be provided	Indrajit	Krishanu, Vaibhav
011	A comparative study of Classification and Clustering using Breast	April 12, 2018	Use Logistic Regression and K means clustering Algorithm	Logistic Regression is for classification and K means is for clustering. This is a binary classification problem as the dataset have only two classes.	Click Here	Indrajit	Asish, Kondeti

	Cancer dataset						
012	Credit card Fraud Detection using SVM, Linear Regression and Logistic Regression technique	April 12, 2018	Compare the performance of a linear SVM kernel Linear Regression and Logistic Regression. Try to find out the difference between them	The comparison will be done on Credit card Fraud detection dataset. Try to find out the confusion matrix, per class accuracy, precision, recall and error rates.	Dataset will be provided	Indrajit	Teegala Vishnu, Vanam
013	Image classification using Deep AutoEncoder and Softmax classifier	April 17, 2018	Use Autoencoder to select the important features from the images and the use the softmax classifier to do the classification	This is a semi supervised deep learning project. Here use autoencoder to reduce the dimension the the features and then use supervised softmax classifier to do the classification	Use MNIST digit classification dataset. (For the details and availability of the dataset you search on google.)	Indrajit	Amit, Rishabh
014	Feature extraction and Image classification using deep	April 17, 2018	Convolution Neural Network is used as a feature extractor. It will automatically	This is a supervised deep learning technique.Extract important feature from train image data and	digit classification dataset. (For the	Indrajit	Banoth, Akshay

	convolution neural network		extract features from input images and using that feature one can classify the class of an image.	then use fully connected layer and any classification layer on the top of the features to do the classification.	details and availability of the dataset you search on google.)		
015	Clustering schemes in credit card fraud detection (K-means and K nearest neighbour)	April 17, 2018	Comparing efficiencies of k nearest neighbour, k-means clustering algorithms	The comparison will be done on Credit card Fraud detection dataset. Try to find out the confusion matrix, per class accuracy, precision, recall and error rates.	Click here	Indrajit	Saikumar, Srikanth
016	Supervised Classification using Self Organizing Feature Map (SOM)	April 19, 2018	SOM is actually an unsupervised clustering technique, but here we will be using it for supervised classification.	We will use an image dataset. SOM is use to indentify classes into which the image fall. The feature matrix and class data is used to train a Learning Vector Quantization neural network that will be used for classification of images presented to it.	Dataset will be provided.	Indrajit	Ajay, Anhbhav

Request from Referee: If you need any clarification or help, please email your convenient timing for the meeting beforehand. Please also ask your project partner to accompany you. Email ID of Referee: shounakc6@gmail.com , indrakalita@gmail.com