OBJECT-RECOGNITION

Rishabh Gupta (2014086)
Kushagra Mahajan (2014055)

Problem Statement	Given an image , classify them into one of the following classes based on the object present in it. **Classes :** Airplane, automobile, bird ,cat , deer, dog , frog , horse , ship , truck .
Datasets	https://www.cs.toronto.edu/~kriz/cifar.html CIFAR-10 is an established computer-vision dataset used for object recognition. It consists of **60,000** , **32x32 color images** containing one of 10 object classes, with 6000 images per class.

Learning Techniques	• **Simple**: Support Vector Machine
	• **Complex**:
	  ○ Neural networks using perceptron model
	  ○ Convolution Neural Networks(Deep Learning)

Training Approaches	Back-Propogation
Activation functions	• Sigmoidal function • Tanh function
Model selection	Cross Validation Technique will be applied in both SVM and Neural Nets for best parameters. All the techniques stated above will be explored and one giving the best results based on Evaluation metrics will be adopted.
Evaluation Metrics	**SVM** : Accuracy , Precision, Recall **Neural Networks** : Accuracy, Precision, Recall