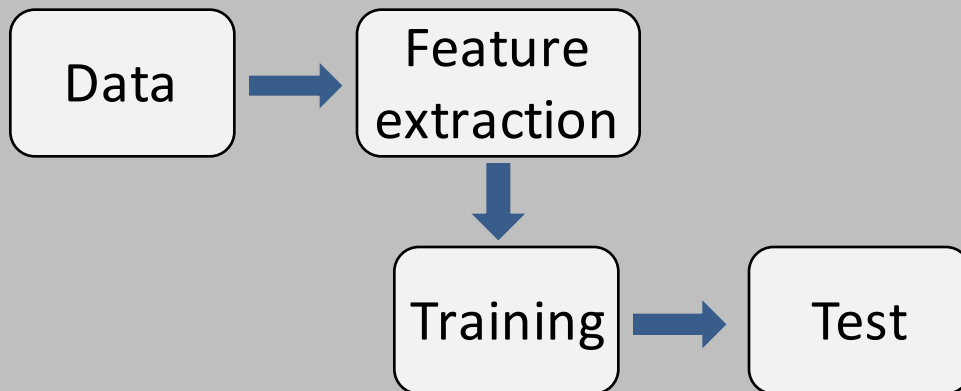# ECE 4950: Machine Learning and Pattern Recognition

Instructor: Jayadev Acharya, acharya@cornell.edu
Classes: MWF 11:15 AM - 12:05 PM
Discussion: Tu 9 AM – 9:55 AM

```
Data  →  Feature
           extraction
              ↓
         Training  →  Test
```

Course Description: Machine learning is one of the most active areas in both industry and research. Various engineering applications, such as image analysis, text classification have been recently approached via machine learning tools. The course will provide students the knowledge of important learning primitives, and experience with real data.

We will cover several supervised methods such as regression, SVM's, decision trees, random forests, neural networks, boosting & bagging, and unsupervised methods such as k-means, k-NN, PCA and other dimensionality reduction methods. The course will have a programming component, administered in the form of assignments, or in-class-kaggle competitions.