



INTRODUCTION TO MACHINE LEARNING (TAMIL)

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INTENDED AUDIENCE: Native Tamil speaking audience (Teachers/ Undergraduate Students)

PREREQUISITES: A basic course in linear algebra/probability/programming/algorithms would be a big plus. These are not strong pre-requisites.

INDUSTRY SUPPORT: All Data centric companies including those that have core business in search/e-commerce/social-media

COURSE OUTLINE:

A short course introducing the main ideas and algorithms of Machine Learning. The goal of the course is to cover the topics at a high level so that it would act as a first course for a full fledged Machine Learning course. The course will be delivered in spoken Tamil while the technical terms discussed/exams/assignments will be in English.

ABOUT INSTRUCTOR:

Prof.Arun Rajkumar is currently an assistant professor in the department of CSE at IIT Madras. His PhD thesis was in the area of Machine Learning and his broad research interests are in the areas of Machine Learning, sequential decision making.

COURSE PLAN:

Week 1: Basics of Linear Algebra, Probability, Optimization

Week 2: Introduction to Supervised Learning - Regression; Topics - Linear Regression; Ridge Regression; LASSO

Week 3: Supervised Learning - Classification; Topics: K-NN, Decision Tree.

Week 4: Supervised Learning - Classification; Topics: Naive Bayes.

Week 5: Supervised Learning - Logistic Regression ,Perceptron.

Week 6: Supervised Learning - Support Vector Machines

Week 7: Supervised Learning - Ensemble Methods

Week 8: Unsupervised Learning - K-means Clustering, PCA