

CS 584: Machine Learning

Objectives

Introduce fundamental problems in machine learning. Provide understanding of techniques, mathematical concepts, and algorithms used in machine learning. Provide understanding of the limitations of various machine learning algorithms and the way to evaluate performance of learning algorithms.

Prerequisites

- CS 430, linear algebra, probability theory.

Syllabus

• Introduction	1.5 hours
• Regression	3.0 hours
• Kernel methods	3.0 hours
• Generative learning	6.0 hours
• Discriminative learning	4.5 hours
• Neural networks	6.0 hours
• Support vector machines	6.0 hours
• Graphical models	6.0 hours
• Unsupervised learning	6.0 hours
• Dimensionality reduction	3.0 hours
Total	45 hours

Edited November 2010 ([html](#), [css](#) checks)