CMPTGCS10

Computer Learning

TR, 5pm-6:50pm, CCS(BLDG494) Room 143

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Course Description: Introduction to basic methods and techniques in Machine Learning, Natural Language Processing, and Deep Learning. Applications include (but not limited to) Computer Vision, Information Retrieval, and Robotics. The main goal of this course is to prepare students for graduate level Artificial Intelligence classes and potential research opportunities.
Prerequisite(s): Math 4A Recommended
Max Units: 2
Main Project: Read a survey of a related topic and pick a paper from it to present to the class.

Tentative Schedule:

Tuesday	Thursday
Jan 5th **1** Probability Review; Basic Text Processing	7th **2** Linear Algebra Review; Edit Distance
12th **3** Linear Algebra, Multivariable Calculus	14th **4** Learning Theory, Linear Regression
19th **5** Logistic Regression, Naive Bayes	21st **6** Naive Bayes, Generative v. Discriminative
26th **7** Hidden Markov Models	28th **8** Information Extraction
Feb 2nd **9** Semantics, Natural Language Understanding	4th **10** Language Modeling, n-grams
9th **11** Word Embeddings: word2vec, GloVe	11th **12** Support Vector Machines
16th **13** Support Vector Machines	18th **14** Clustering
23rd **15** Deep Learning	25th **16** Deep Learning
Mar 1st **17** Deep Learning	3rd **18** Deep Learning
8th **19** Deep Learning	10th **20** Paper Presentations