CMPTGCS10

Computer Learning

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

Faculty Advisor: Omer Egecioglu (omer@cs.ucsb.edu)
Student Leaders: Jeremy Irvin (jirvin@umail.ucsb.edu)
Daniel Spokoyny (dspoka@gmail.com)

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.

Class Site: http://computer-learning.github.io/class/   **Max Units:** 2

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