CS289MLF16

Mon Sep 26, 2016

2pm How to model learning?

Calendar: CS289MLF16
Created by: Raghu Meka
Description: Notes.

Wed Sep 28, 2016

2pm How to model learning?

Calendar: CS289MLF16
Created by: Raghu Meka
Description: Notes.

Mon Oct 3, 2016

2pm Algorithm 1: Multiplicative weights.

Calendar: CS289MLF16
Created by: Raghu Meka
Description: Notes covering what we did in class. Lecture notes by Umesh Vazirani.

Wed Oct 5, 2016

2pm Algorithm 1b: Boosting. Assignment 1.

Calendar: CS289MLF16
Created by: Raghu Meka
Description: Notes covering what we did in class.

Mon Oct 10, 2016

2pm Linearity: best-fit subspaces.

Calendar: CS289MLF16
Created by: Raghu Meka
Description:
Topics: Best-fit subspace problem. Singular vectors. Notes for the lecture.
Additional references: Chapters 3.1,3.2, 3.3 of [BHK]. This paper by 23andme makes for an entertaining read.

Wed Oct 12, 2016

2pm Algorithm 2: SVD and PCA. Assignment 1 due.

Calendar: CS289MLF16
Created by: Raghu Meka
Description: Notes here. Additional references: Chapters 3.1,3.2, 3.3 of [BHK].

Mon Oct 17, 2016

2pm Algorithm 2: SVD and PCA.

Calendar: CS289MLF16
Created by: Raghu Meka
Description:
Computing singular vectors by power iteration. You can find the proof of the theorem we did in class (in slightly different notation) in Section 3.7 of [BHK].

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Wed Oct 19, 2016

2pm Learning as optimization. Assignment 2.

Calendar: CS289MLF16
Created by: Raghu Meka
Description:
Formulation of Empirical Risk Minimization, Gradient Descent, Convexity. Next class: Analysis of GD for Convex Lipschitz functions.

Mon Oct 24, 2016

2pm Algorithm 3: Gradient descent.

Calendar: CS289MLF16
Created by: Raghu Meka
Description: Notes for the class.

Wed Oct 26, 2016

2pm Algorithm 4: Stochastic gradient descent. Assignment 2 due.

Calendar: CS289MLF16
Created by: Raghu Meka
Description: Notes for the class.

Fri Oct 28, 2016

12pm Assignment 3 posted online.

Calendar: CS289MLF16
Created by: Raghu Meka

Mon Oct 31, 2016

2pm Algorithm 5: Convex Relaxations and Compressed Sensing

Calendar: CS289MLF16
Created by: Raghu Meka
Description: Notes for the class.

Wed Nov 2, 2016

2pm

Algorithm 5: Convex relaxations and Compressed Sensing. Assignment 3 due on Friday.

Calendar: CS289MLF16
Created by: Raghu Meka

Fri Nov 4, 2016

4pm Assignment 3 due.

Calendar: CS289MLF16
Created by: Raghu Meka

Mon Nov 7, 2016

2pm Midterm

Calendar: CS289MLF16
Created by: Raghu Meka

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Wed Nov 9, 2016

2pm Neural networks. Back propogation.

Calendar: CS289MLF16
Created by: Raghu Meka
Description: Notes for the class.

Mon Nov 14, 2016

2pm Topic modeling. Non-negative matrix factorization.

Calendar: CS289MLF16
Created by: Raghu Meka
Description: Notes for class.

Wed Nov 16, 2016

2pm Topic modeling.

Calendar: CS289MLF16
Created by: Raghu Meka
Description: Notes for the class

Mon Nov 21, 2016

2pm Algorithms for massive data sets. Assignment 4.

Calendar: CS289MLF16
Created by: Raghu Meka
Description: Notes for the class.

Wed Nov 23, 2016

2pm Algorithms for massive data sets.

Calendar: CS289MLF16
Created by: Raghu Meka

Mon Nov 28, 2016

2pm Algorithms for massive data: count-min sketch.

Calendar: CS289MLF16
Created by: Raghu Meka
Description: Brief notes for the lecture.

Wed Nov 30, 2016

2pm

Count-distinct problem. Independent component analysis. Assignment 4 due, Assignment 5 out.

Calendar: CS289MLF16
Created by: Raghu Meka
Description: Brief notes for the lecture.