

SELECTED TOPICS ON MACHINE LEARNING AND COMPUTER VISION

SEMINAR 2017.8-2019.1

对象:

数院, 信科, 物理大二大三同学

Topics:

- Machine learning Elements
- Nerual Network and Deep Learning, Computer Vision
- Stochastic Optimization& Randomized Numerical Linear Algebra.
- Sparse optimization & Compressed Sensing

先修或者在修要求

数学分析,高等代数,概率论,优化算法(需要知道简单的优化算法, 针对不会的同学会发补习材料)

python,matlab,C++会至少一种(你要matlab算bp我也不拦着你。。。。可以现学)

p.s.本讨论班希望数学一点不希望是玄学讨论班, 另外希望能有一些project大家一起实现

人数尽量控制在10人以内

形式

每个人选择一个话题把参考材料中的相应内容看完

或者在最近看到的paper里面看到比较感兴趣的话题介绍给大家

争取每个人有2-3次pre的机会 = = [要时间允许

Time:

8月下旬不定期(尽可能避开大二同学的军训)

开学后每周日早上

参考材料:

courses:

Stanford CS229 Machine Learning, **CS231** CNN for Visual Recognition.

CMU 10701 Introduction To Machine Learning; **10601** Machine Learning; **10708** Probabilistic Graphical Models

Berkeley CS294 Deep Reinforcement Learning

Books:

Computer Vision: A Modern Approach

机器学习 周志华

The Element Of Statistical Learning; Machine Learning A Probabilistic Perspective

Deep learning(Yoshua Bengio)

An Introduction to Compressive Sensing(Richard Baraniuk, Mark, A. Davenport, Marco, F., Duarte, Chinmay, Hegde)

Introductory Lectures on Stochastic Optimization(John C. Duchi)

Papers From ICLR, NIPS, ICML, CVPR, ICCV, IJCAI, AAI and etc.