Class Project Guidelines

EL9123: INTRODUCTION TO MACHINE LEARNING, SPRING 2018

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Process (5 weeks)

- ❑ Find a project partner (team of 2 preferred)
- ❑ Decide on project topic (find suitable dataset, possible ML solutions to try) (4/9-4/23)
  - Can email me or meet with me to discuss
- ❑ Submit project plan (4/23)
- ❑ Submit project report (in slide format, saved in pptx or pdf) and code (5/16)
  - Can use either Jupyter notebook or python directly
- ❑ Recommend that you set up a Github page for the project and provide the link in your submission
- ❑ 20% of your grade.

Type of projects

- Identify the problem
  - Think of several ML problems that are of interests to you, look for data sets
  - You can also try to create your own dataset, but you have to be sure you have sufficient data!
  - Regression or classification are both fine
- Think of possible solutions
  - Can focus on one method but thoroughly investigate options and optimize the parameters
  - Can also compare several ML methods
  - Classical ML or deep learning are both fine
  - Must contain comprehensive evaluations in your report
- Does not have to have novel ideas or publishable. But aim high!
  - If you would like to try some latest development, look for ideas in recent conference publications: CVPR (vision problems), ICML, KDD etc.

Project plan

- ❑ Must contain the following
- ❑ Team members
- ❑ Project Title
- ❑ Project abstract: what problems, what data set, what solutions, how to evaluate
- ❑ Milestones: Target data to complete each step
- ❑ References: list of references including dataset and papers.
  - Must have **complete** citation of either papers or web link URL
- ❑ 1-2 page

Project Report

- Can be in the form of a slide presentation
- Must include the following
  - Team and Proj Title
  - Problem statement
  - Problem formulation (training data, loss function, training procedure, …)
  - Evaluation results
  - Pay attention to grammar and spelling!
- ~ 10 slides

NO Plagiarism!

- Do not copy posted reports somewhere!
- Do not duplicate posted code somewhere!
- Will use Turnit In for report submission
- If you follow some papers or reports, DO NOT copy complete sentences
  - Tunitin will find it!
  - Rewrite in your own sentences to show your understanding
- Cannot use the same project for multiple courses to get multiple credits!