CS 7267 – Project Guide

- The goal of the project is to apply machine learning techniques to real world problems. You can use any libraries or built-in functions.

The project will be evaluated by:

1. Whether the motivation of the project is well described.
2. Whether the choice of machine learning techniques is well justified.
3. How well the experimental results are discussed.
   a. Why does a method produce better results than others? (if applicable)
   b. Why do not the methods give significantly different performance? (if applicable)
4. Whether the method is properly applied to realistic data sets that may be being used in practice.
5. How well the experimental settings are described.
   a. What methods do you consider? How do you tune the optimal parameter?
   b. What are evaluation strategies (e.g., k-fold cross validation) for the performance comparison?
   c. How many times are the experiments repeated?
6. How well the experimental results are discussed.
   a. How can the experimental results be interpreted?
7. Conclusion
8. Misc.
   a. What obstacles have you overcome?
   b. Any issues that you want to share with others?
   c. Any future plans in related research?

For the project proposal, find a dataset that you may be interested. Kaggle.com and UCI Machine Learning Repository contain a lot of interesting datasets and well-defined problems. If you have any specific related dataset, you can suggest it too.

The followings have to be included in the proposal:

1. Problem definition
2. List of the method(s) that you will implement (or compare)
3. Brief description of the data (e.g., # of samples and features)
4. Description of Data settings or preprocessing (if need)
5. Experiment Design
TWO can make a team (All individual project for PhD students) However, must clearly show what contribution each member did in the presentation and final report. Otherwise, will not be evaluated.

- **Presentation:**
  - Presentation for project:
    - Monday, November 26, 2018
    - Wednesday, November 28, 2018
    - Monday, December 3, 2018
    - Wednesday, December 5, 2018

**Deadline:**

You have to submit the proposal for project to D2L by **Sunday, October 21, 2018.**

- **Extra bonus points**
  - You will be given extra 5% if you give a poster presentation at C-day.
  - All proposals have to be approved by me in advance. Therefore, you MUST indicate whether you are interested in C-day or not.