CS 6316 – Semester Machine Learning Project

Fall 2017

This semester in CS 6316 – Machine Learning you will be asked to carry out a semester-long project where you will select, solve and implement a comparative classification or regression task whereby you use at least two different machine learning algorithms.

Logistics:

- 4-5 students per team (no team < 3 students, without my permission)
- Problem needs to be accepted by me
- All students must:
  - participate in project presentations (intermediate and final)
  - contribute to the project as a whole (obviously!)
  - contribute to writing the final **project report** (see next section)
  - submit peer evaluations of their teammates [*will affect final project grade!*]

Project Breakdown / Report

- Problem definition / description
- Background (and state-of-the-art)
  - Including challenges and goals
- Data source – Including size and description
- Preprocessing
- Feature selection and dimensionality reduction (if appropriate)
- Algorithms
- Metrics
- Model selection using cross-validation
- Experimental design and comparative performance evaluation (on sequestered data for each algorithm)
- Software and hardware used
- Discussion / Conclusions
  - Could include areas of improvement and/or future work if project were to be extended
- References

***Problems** within your group? **Questions**? Come speak to me early – rather than later!!*