2020_spring_projects

February 10, 2020

1 2020 Spring; Advanced Python for Data Science; Projects

Students within a group will develop a problem that they would like to work on. After "project proposal presentations" the instructor will schedule and meet with groups whose proposals are either overly or insufficiently complex.

The proposal and final project will be graded based on:

- Demonstrated understanding of advanced Python concepts
- Demonstrated understanding of the final project problem
- Quality of documentation: one report of maximum 4 pages
- Quality of the presentation: clarity of the exposition, slides quality, and duration (the groups should respect the time slot, 5-8 minutes).

1.1 Projects Examples:

- Optimization tools; such as fast numerical computation; or mathematical models and tools for data science;
- Social Network Analysis;
- Twitter analysis;
- Dynamical Processes: epidemics, market adoption, etc.;
- Neural network projects optimized;
- Processing and/or statistics of "large objects": e.g. fast or memory efficient algorithm on: images, data sets, data streams;
- NYC Taxi fare prediction: https://www.kaggle.com/c/new-york-city-taxi-fare-prediction/data
- Stock Portfolio Optimization;
- Efficient forecasting over large data sets or streams;
- Stochastic models for predictions of: road/train-system delays; product adoption; spread of epidemics;

- Improvement of some of your previous machine learning projects by using the tools from "Advanced Data Science" course;
- etc.

2 Groups and Students

The students in the class will form groups of 5 students on their own.

2.0.1 Group 01:

2.0.2 Group 02:

2.0.3 Group 03:

2.0.4 Group 04:

2.0.5 Group 05:

2.0.6 Group 06:

2.0.7 Group 07:

2.0.8 Group 08:

2.0.9 Group 09:

2.0.10 Group 10:

2.0.11 Group 11:

2.0.12 Group 12:

2.0.13 Group 13:

2.0.14 Group 14:

2.0.15 Group 15: