Instructions for Data Science Project

Timeline

April 11, noon:	Project proposals due (10% of the project grade);
April 12, noon:	Project approval;
April 19, 5 pm:	Progress Report I (15% of the project grade);
April 26, 5 pm:	Progress Report II (15% of the project grade);
April 27, in class:	Class presentation (20% of the project grade);
May 5, noon:	Final reports due (40% of the project grade);
(tentative) May 5 or May 8:	Individual meetings – project discussion.

Project Theme and Teams

Teams. Each project could have one or two students in a team. The expected amount of work for 2-person projects is about double the work for 1-person projects. The expected amount of work for the whole project per student is about 40 hours.

Topic: You are free to choose your topic. Start from the links provided in Lab 10 and look at other labs (such as Lab 9) and propose a topic. The work should go well beyond what you did in labs – you are expected to put an extra effort in data collection, data processing, exploratory data analysis, and predictive analytics. Consider creating an actual product, such as a web page or an app that serves a customer. In case of doubt, you should feel free to consult with the professor or the teaching assistant.

Project proposal

Proposal should be 2 pages in length with 11pt font size and double spacing. It should contain

- **Project title and student name(s)**
- **Introduction Section**: give motivation; describe the problem; mention related work and results
- **Proposed Work Section**: explain the idea; explain proposed approaches and methodology
- **Timeline**: propose the timeline for the project (state what will be done after Week 1, 2, 3);
- **References**: provide at least 2 related references (excluding the textbooks, could be a web link)

Progress Report I and II

A 2-page report summarizing the project status – what has been done, what has not been done, what will be done during the following week, possibly describe unforeseen problems, and propose modifications to the original project goals.

Final Report

Project deliverables should include a project report and relevant programs and result listings. Project report should consist of: Title, Abstract, Introduction, Methodology, Results, and References sections. Programs and results listings to be delivered will depend on the specific project. The report should be 5 pages in length with 11pt font size and single spacing. It should contain

- **Project title and student name**
- **Introduction Section**: give motivation; describe the problem
- **Approach**: explain the idea; explain proposed approaches and methodology
- **Results**: explain what was done, show results, discuss results
- **Conclusion**: Summarize the whole project and its outcome

Other Deliverables

- **Programs** could be submitted as ipynb file(s)
- **Additional figures and tables** – if you really like your results but cannot fit them in the 5-page report, place them in a separate file called the the appendix. Should be labeled with captions.
- **Pointers** to any artifacts such as project web pages.