Data 451
Data Science Capstone I
Winter 2017

Mondays and Wednesdays 2:10-5:00 PM in 20-127

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Office:	14-210	25-105
Office Hours:	Wed 8:30-10 AM	Tues 1-2:30 PM
	Thurs 1:10-2 PM	
	Fri 8:30-10 AM	
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Course Description

This is the first quarter in a two-quarter capstone sequence for the Data Science minor. Over the next two quarters, you will work in teams to solve data science problems of interest to a real-world customer. You will sharpen your analytical skills and practice communicating your results to the customer.

The first quarter of this capstone focuses on design and exploration. We expect you to be creative and to take initiative in solving the customer's problem. As instructors, we will serve as senior consultants, especially when you run into a roadblock, but we will not tell you what you should be doing. That is for your team to figure out!

Course Structure

- The instructors will meet with each team individually for 1 hour per week. Every member of the team is required to attend.

- There may be lectures on new models and approaches that we did not have the chance to cover in DATA 301 or 401. We will try to focus on topics that are of direct relevance to your projects.

- We may also have in-class activities (no more than 1 hour / week), including time for teams to present their progress.

- The remaining time is for your team to meet and work on the project together, as well as to check in with your customer (on a schedule to be determined between your team and the customer).

Textbook

There is no textbook for this class. Readings will be posted on the course website.

Communication

The course website can be found at `users.csc.calpoly.edu/~dekhtyar/451-Winter2017`.

We will be using Piazza for all course communications: `piazza.com/calpoly/winter2017/data451`.

Grading

Mid-Project Report (25%)

At the end of the quarter, your team will submit a written report documenting your progress. This report will be shared with the customer, so it should be professionally written.

End-of-Quarter Presentation (25%)

At the end of the quarter, your team will deliver a professional presentation summarizing your findings. The presentation should convey a clear message using graphics where appropriate.

Teamwork and Participation (25%)

This is the only "individual" component of the grade. It is based on how well you work with your teammates and how much you participate in in-class discussions.

Project Management (15%)

We expect you to use tools like github, trello, slack, gitter, and similar tools for issue management, communication within the team, and communication with the instructors and the customers. All activity should be properly logged, documented, and subject to review.

We may ask students to give brief presentations about different project management tools and techniques.

Results (10%)

We want to encourage you to think outside the box and come up with real insights using the data. Therefore, part of the grade is reserved for how interesting your results are.

Academic Integrity

We expect you to adhere to Cal Poly's policies on academic integrity. In particular, cheating and plagiarism will not be tolerated in any form. Please refer to the university's policies for more information:

   `http://www.academicprograms.calpoly.edu/content/academicpolicies/Cheating`