

PM 606 Health Data Science Practicum



Units:	3
Term:	Summer 2021
Time:	Tuesdays 1-4pm
Location:	Online
Instructor:	Meredith Franklin
Office:	SSB 202A
Office Hours:	By Appointment
Contact Info:	meredith.franklin@usc.edu

Course Description

This course serves as the practicum for the Public Health Data Science program. In this course, students will work to tackle the challenges involved in analyzing an external medical research or healthcare industry dataset.

The goal of the practicum is to provide an opportunity to face real-world data science challenges. It will combine exposure to industry and academic experience, including project management techniques, writing effective reports in an efficient manner, efficiency and effectiveness.

Learning Objectives

Through this practicum course, students will:

- apply the various data science skills studied in the Health Data Science curriculum toward solving a real-world health data challenge
- learn to handle the difficulties associated with defining and organizing a data science problem
- learn to present and sell ideas to a broad audience, including technical managers, business teams, and stakeholders
- work to meet aggressive deadlines in a multidisciplinary team effort
- improve presentation skills, both in-class and industry settings
- learn to write an effective report
- understand how to work with individuals from diverse domains (statistics, engineering, healthcare, business, etc.) to accomplish a common goal

Prerequisite(s): None

Recommended Preparation: Completion of MS Health Data Science core courses.

Course Notes

Slides and notes presented in class will be posted on the course Blackboard.

Technological Proficiency and Hardware/Software Required

Tools learned throughout the Data Science program (R, Python, Git, Markdown) are required for this practicum.

Description and Assessment of Assignments

At the first class meeting, the project dataset will be introduced along with any stakeholders or partners involved in the project. The problem and requirements for the final report will be presented to the class at this time.

The final deliverable for this course is a written report that reflects a proposed solution, and subsequent results, for a project involving a large health related dataset. The final project will be evaluated by the course professor and by peer review. There will also be final presentations of the projects at the end of the semester, which will also be evaluated as part of the final project.

Three progress reports that must be submitted throughout the course. These progress reports will be graded by the course professor.

Students are required to meet with the lead professor of the practicum no less than three times during the semester. A midterm class meeting will be held to go over questions and issues relating to the practicum project.

Grading Breakdown

<u>Assignment</u>	<u>% of Grade</u>
Course Project Report	60%
Peer Review of Report	10%
Course Project Presentation	10%
Progress Reports (3)	10%
Instructor Meetings	10%
TOTAL	100%

Assignment Submission Policy

Progress reports shall be submitted through Blackboard. The final project shall be published on GitHub. Late reports will not be accepted, except when verifiable extenuating circumstances can be demonstrated.

Course Schedule: A Weekly Breakdown

	Topics/Weekly Activities	Due Dates
Week 1	Project presentation and description of practicum dataset	
Week 2	Weekly meeting for project related questions & individual group meetings	
Week 3	Weekly meeting for project related questions & individual group meetings	
Week 4	Weekly meeting for project related questions & individual group meetings	Project Progress Report 1 Due
Week 5	Weekly meeting for project related questions & individual group meetings	
Week 6	Weekly meeting for project related questions & individual group meetings	
Week 7	Weekly meeting for project related questions & individual group meetings	
Week 8	Weekly meeting for project related questions & individual group meetings	Project Progress Report 2 Due
Week 9	Writing an effective report	
Week 10	Weekly meeting for project related questions & individual group meetings	
Week 11	Weekly meeting for project related questions & individual group meetings	
Week 12	Weekly meeting for project related questions & individual group meetings	Project Progress Report 3 Due
Week 13	Making an effective presentation	
Week 14	How to conduct peer review, dry run of presentations	
Week 15	Final Project poster presentation event	Posters Due
FINAL	Final Project	Final Report Due

Statement on Academic Conduct and Support Systems

Academic Conduct:

Plagiarism – presenting someone else’s ideas as your own, either verbatim or recast in your own words – is a serious academic offense with serious consequences. Please familiarize yourself with the discussion of plagiarism in *SCampus* in Part B, Section 11, “Behavior Violating University Standards” <https://policy.usc.edu/scampus-part-b/>. Other forms of academic dishonesty are equally unacceptable. See additional information in *SCampus* and university policies on scientific misconduct, <http://policy.usc.edu/scientific-misconduct>.

Support Systems:

Student Counseling Services (SCS) - (213) 740-7711 – 24/7 on call

Free and confidential mental health treatment for students, including short-term psychotherapy, group counseling, stress fitness workshops, and crisis intervention. <https://engemannshc.usc.edu/counseling/>

National Suicide Prevention Lifeline - 1-800-273-8255

Provides free and confidential emotional support to people in suicidal crisis or emotional distress 24 hours a day, 7 days a week. <http://www.suicidepreventionlifeline.org>

Relationship and Sexual Violence Prevention Services (RSVP) - (213) 740-4900 - 24/7 on call

Free and confidential therapy services, workshops, and training for situations related to gender-based harm. <https://engemannshc.usc.edu/rsvp/>

Sexual Assault Resource Center

For more information about how to get help or help a survivor, rights, reporting options, and additional resources, visit the website: <http://sarc.usc.edu/>

Office of Equity and Diversity (OED)/Title IX compliance – (213) 740-5086

Works with faculty, staff, visitors, applicants, and students around issues of protected class. <https://equity.usc.edu/>

Bias Assessment Response and Support

Incidents of bias, hate crimes and microaggressions need to be reported allowing for appropriate investigation and response. <https://studentaffairs.usc.edu/bias-assessment-response-support/>

The Office of Disability Services and Programs

Provides certification for students with disabilities and helps arrange relevant accommodations. <http://dsp.usc.edu>

Student Support and Advocacy – (213) 821-4710

Assists students and families in resolving complex issues adversely affecting their success as a student EX: personal, financial, and academic. <https://studentaffairs.usc.edu/ssa/>

Diversity at USC

Information on events, programs and training, the Diversity Task Force (including representatives for each school), chronology, participation, and various resources for students. <https://diversity.usc.edu/>

USC Emergency Information

Provides safety and other updates, including ways in which instruction will be continued if an officially declared emergency makes travel to campus infeasible, <http://emergency.usc.edu>

USC Department of Public Safety – 213-740-4321 (UPC) and 323-442-1000 (HSC) for 24-hour emergency assistance or to report a crime

Provides overall safety to USC community. <http://dps.usc.edu>