Data Science Foundations:
Special Seminar for Data Scholars in Data 8
CS 198-801 Instructor: Oscar Syu
Room: Barrows 356B, Monday 4-5 pm

Course Description:
Data Scholars provides a community where students from many disciplines and backgrounds learn together and develop their skills in Data Science. Students receive support in introductory Data Science courses, mentorship, and guidance to succeed in the field through project work, community with other Scholars, and pathways to get involved with Data Science research and teaching. The program primarily focuses on serving students that identify as a member of one or more of the following: first-generation college students, low-income, and women and historically underrepresented groups.

This course is a 1 unit seminar for students in the Data Scholars program who are enrolled concurrently in Data 8. This seminar meets for one hour, once per week. Students will attend the class and engage with other student scholars, program staff, and the student instructor weekly.

Course Objectives
- Students will engage in topics of diversity in the field of Data Science and its unique challenges.
- Students will gain an understanding of campus, departmental, and course resources available to them.
- Students will receive adequate support, mentorship, and tutoring to engage and perform successfully in Data 8.

Course Features
- Mentorship and support from the student instructor on a weekly basis
- 50-minute tutoring session each week (through existing Data 8 tutoring infrastructure)
- Academic and professional development support
- Course enrollment advising
- Fun networking socials
- Assistance from seminar student instructor and collaboration with peers on the optional 4th project for Data 8, for students interested in completing it.
- Information on how to continue to engage with the Berkeley data science ecosystem

Requirements
To earn 1 unit of academic credit, each student enrolled will:
- Attend weekly 1 hour seminar with no more than two unexcused absences, and no more than three absences total.
- Attend regular tutoring sessions (1 hour/week) and complete the attendance check-in form, missing no more than two sessions (sessions cancelled by the tutor/staff are excused).
- Complete assignments and homeworks to the best of ability

Grading
- Final Project: 30%
- Worksheets and Assignments: 30%
- Attendance: 40%

Calendar

Week 1 (8/27) - Introduction

Week 2 (9/3) - No Class (Labor Day)

Week 3 (9/10) - Programming Fundamentals

- Python basics
- Table methods and review

Week 4 (9/17) - Programming Fundamentals 2

- Python basics
- How to learn a new programming language
- Data exploration preview

Week 5 (9/24)- Project 1 Worksession

- Concept Review
- Work time

Week 6 (10/1) - Speaker TBD

Week (10/8) - Midterm Review

- Practice Problems

Week (10/15) - Research Talk

Week (10/22)- Nitin Kohli - Data Ethics

Week (10/29) Project 2 Worksession

- Concept Review
- Work time

Week (11/5) - Final Exploration Introduction

Week(11/12) - No Class (Veterans Day)

Week (11/19) - Project 3 and Final Exploration Worksession

- Seaborn and Pandas introduction

Week (11/26) - Final Review

TBD: Final Project Exhibition