Suraj Rampure

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Employment

2024- **Lecturer III**

Computer Science and Engineering, University of Michigan, Ann Arbor

2021-2024 **Lecturer**

Halıcıoğlu Data Science Institute, University of California, San Diego

Education

2020-2021 **University of California, Berkeley**

MS, Electrical Engineering and Computer Sciences

Thesis: *A New Data-Focused Introductory Programming Course*

Advisor: Josh Hug

2016-2020 **University of California, Berkeley**

BS, Electrical Engineering and Computer Sciences

Awards and Honors

2024 Distinguished Teaching Award, UC San Diego

2021 Extraordinary Teaching in Extraordinary Times Award, UC Berkeley

2020 Distinguished Graduate Student Instructor Award, UC Berkeley EECS

2018 Outstanding Graduate Student Instructor Award, UC Berkeley

Teaching

University of Michigan, Ann Arbor

EECS 398: Practical Data Science

Instructor and Course Designer: **Spring 2025**, Winter 2025, Fall 2024

Skills and tools for building practical data science projects, along with their theoretical underpinnings – `pandas`, `numpy`, `sklearn`, and Jupyter Notebooks, along with loss functions, gradient descent, and linear and logistic regression. Sole instructor responsible for developing all course content and managing a course staff of ~6.

Enrollment: 140 students (academic year), 25 students (spring).

University of California, San Diego

DSC 10: Principles of Data Science

Instructor: **Fall 2023**, Spring 2023, Fall 2022, Winter 2022, Fall 2021

An introduction to Python and Jupyter Notebooks as tools for tabular data manipulation, visualization, and statistical inference. Significantly revised lectures and created new assignments, exams, and infrastructure, while managing up to 30 instructional assistants.

Enrollment: 200-500 students.

DSC 180AB: Data Science Project I + II

Instructor and Coordinator: **AY 2023-24**, AY 2022-23

Required two-quarter capstone sequence for all senior data science majors. Developed new lessons and assignments to supplement student projects after surveying faculty about curriculum deficiencies (e.g. resolving Git merge conflicts in Jupyter Notebooks, using LaTeX, using `torch` on GPU-enabled servers). Managed faculty onboarding and student enrollment. Provided faculty and students with weekly guidelines and organized annual poster sessions.

Enrollment: 200-240 students.

DSC 40A: Theoretical Foundations of Data Science I

Instructor: **Spring 2024**, Fall 2021

A proof-heavy treatment of empirical risk minimization and supervised learning using linear algebra; also introduces discrete probability. Revised lectures and assignments.

Enrollment: 140 students.

DSC 80: Practice and Application of Data Science

Instructor: **Winter 2024**, Winter 2023, Spring 2022

A project-heavy course focused on the data science lifecycle, with topics ranging from `pandas`, `BeautifulSoup`, and regular expressions to missing value imputation, cross-validation, and logistic regression. Significantly revised lectures and assignments.

Enrollment: 125-200 students.

DSC 90: History of Data Science Seminar

Instructor and Course Designer: **Spring 2022**, Winter 2022

A guided tour of the origins of key ideas in data science, including calculus, probability, linear regression, visualization, and programming. Developed all content from scratch.

Enrollment: 15-30 students.

DSC 95: Teaching Apprenticeship in Data Science

Instructor: Spring 2024, **Spring 2023**

Required training for first-time undergraduate instructional assistants. Developed several new lessons and a final project in which students were required to develop instructional materials for their courses; provided all students with multiple rounds of feedback.

Enrollment: 18 students.

CSS 201/202S: Teaching Apprenticeship in Data Science
Instructor: **Summer 2022**
Taught one week of an eight-week, 9AM-5PM bootcamp for incoming Computational Social Science MS students; introduced students to Python. Created lectures and assignments.
Enrollment: 8 students.

University of California, Berkeley
Data 94: Introduction to Computational Thinking with Data
Instructor and Course Designer: **Spring 2021**
A small-scale introductory programming course designed to attract non-major students to data science. Created most lectures and homework assignments from scratch, iterating on prior offerings of a related course. Designed as part of MS thesis.
Enrollment: 18 students.

Data 100: Principles and Techniques of Data Science
Instructor: **Summer 2020**; Head TA: Fall 2020, Spring 2020, Fall 2019, Spring 2019, Fall 2018
An introduction to common data science tools and machine learning methods. Recorded lecture videos, taught live lecture and discussion sections, held office hours, created and updated several assignments, and wrote exams.
Enrollment: 330 students (as an instructor), 900-1200 students (as a head TA).

CS 198-087: Introduction to Mathematical Thinking
Instructor and Course Designer: **Spring 2019**, Fall 2018
An introductory discrete math course with the goal of preparing students for future required coursework in discrete math. Created all lectures, notes, homeworks, quizzes, and exams from scratch. Taught as a "DeCal" (student-run course with a faculty advisor).
Enrollment: 80-90 students.

CS 70: Discrete Mathematics and Probability Theory
TA: **Summer 2019**

CS 375: Teaching Techniques in Computer Science
TA: **Summer 2019**

CS 61A: Structure and Interpretation of Computer Programs
TA: **Spring 2018**

Data 8: Foundations of Data Science
TA: **Fall 2017**; Tutor: Spring 2017

Conference Publications

The Challenges of Evolving Technical Courses at Scale: Four Case Studies of Updating Large Data Science Courses
Sam Lau, Justin Eldridge, Shannon Ellis, Aaron Fraenkel, Marina Langlois, **Suraj Rampure**, Janine Tiefenbruck, and Philip J. Guo. Learning @ Scale 2022.

Experiences Teaching a Large Upper-Division Data Science Course Remotely
Suraj Rampure*, Allen Shen*, and Josh Hug. SIGCSE TS 2021.

Talks

Different Mediums for Different Audiences: A Capstone Case Study
Suraj Rampure. Teaching and Evaluating Data Communication at Scale 2024 (invited).

Otter-Grader: A Lightweight Solution for Creating and Grading Jupyter Notebook Assignments
Suraj Rampure and Christopher Pyles. Jupytercon 2023.

Data 6: A New Introductory Course
Suraj Rampure. National Workshop on Data Science Education 2021.

Data 100: Principles and Techniques of Data Science
Joseph Gonzalez and **Suraj Rampure**. National Workshop on Data Science Education 2020.

Panels and Birds of a Feather

A New Class of Teaching-Track Faculty: No Ph.D. Required
Michael Ball, **Suraj Rampure**, and Kevin Lin. BoF at SIGCSE TS 2025.

A New Class of Teaching-Track Faculty: No Ph.D. Required
Kendra Walther, Adam Blank, Michael Ball, and **Suraj Rampure**. Panel at SIGCSE TS 2023, 2022.

Introduction to Computational Thinking with Data
Deborah Nolan, Lisa Yan, **Suraj Rampure**, and Vivian Carter. National Workshop on Data Science Education 2022.

Service

Institutional Committees and Leadership

2024-	Co-Chair, Data Science Undergraduate Program Committee, U-M CSE
2024-	Member, Computer Science Undergraduate Program Committee, U-M CSE
2024-	Faculty Advisor, U-M CSE
2023-2024	Faculty Advisor, Library Educational Dataset Service, UC San Diego

2022-2023 Member, Teaching Professor Search Committee, UC San Diego HDSI
2022-2024 Coordinator, Data Science Senior Capstone Program, UC San Diego HDSI
2021-2024 Member, Data Science Undergraduate Program Committee, UC San Diego HDSI
2020 Student Representative, Data Science Building Planning Meetings, UC Berkeley
2020 Member, Graduate Student Instructor Survey Analysis Committee, UC Berkeley EECS
2019-2020 Member, Graduate Student Instructor Teaching Task Force, UC Berkeley EECS

Outreach

2024- Faculty Mentor, MaCSS Scholars, U-M
2023 Panelist, Predicting the Future with Data Science, MiraCosta College
2022-2023 Member, Data Science Pathways Working Group, UC San Diego and MiraCosta College
2022 Speaker, The Institute for Learning-Enabled Optimization at Scale's High School Field Day, UC San Diego
2022 Curriculum Advisor, Diversity in Data Science's Python Bootcamp, UC San Diego
2020 Section Leader, CS 106A Code in Place, Stanford University
2019-2020 Panelist and Moderator, EECS/CS Life from a Student Perspective, UC Berkeley
2019 REU Workshop Instructor, Center for Energy Efficient Electronics Science, UC Berkeley
2018-2019 Exhibitor, Bay Area Technology Education and Learning Support (TEALS) CS Fair
2016, 2019 Activity Leader, CS Education Day, UC Berkeley

Other

2025- Organizer, Python Teaching Commons, U-M
2025 Instructor, DAIR3 Workshop, Michigan Institute for Data & AI in Society, U-M
2025 Candidate Host, Teaching Faculty Search Committee, U-M CSE
2025 Guest Speaker, Michigan Hackers, U-M
2023-2024 Advisor, Data Science Advisory Board, Pearson
2022 Program Committee, EAAI-22 (The Symposium on Educational Advances in Artificial Intelligence)
2021 Podcast Guest, UC Berkeley Data Science Education Podcast (Episode Title: The Importance of Data Science Course Staff)
2020-2021 Instructor, Campus-Wide Teaching Conference for First-Time Graduate Student Instructors, UC Berkeley
2020 Q&A Panelist and Workshop Leader, 2020 National Workshop on Data Science Education

Other Work Experience

2018 Software Engineering Intern, McKinsey & Co, New York, NY