Welcome to Data C88C!

Instructor Team for Data C88C and CS 61A

John DeNero (he/him) — denero@berkeley.edu
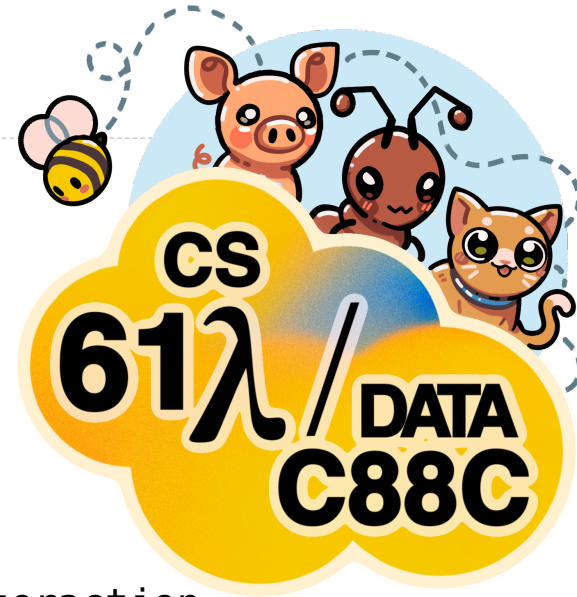
CS 61A instructor at least once per year since 2011

Research on language models and how people use them

Office hours 1pm–3pm Tuesdays in Warren 101B

Shm Almeda (they/them) — shm.almeda@berkeley.edu

PhD student in Computer Science studying Human–Computer Interaction

Art/Tech

Office hours 3pm–4pm Monday (location TBD)

Jedi Tsang (he/him) — jedidiahtsang@berkeley.edu

Co–instructor for Data C88C (with John) & will give some guest lectures in 61A

Poli Sci + Computer Science '23 & recently graduated M.S. in EECS

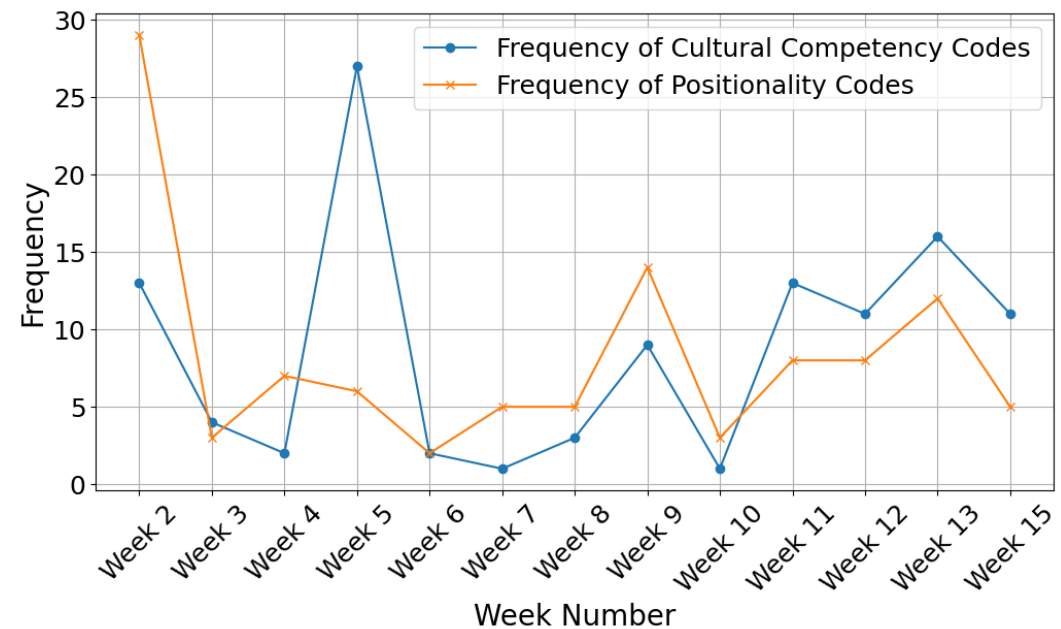Office hours 1pm–3pm Thursday (location TBD)

Jedi's Research: Computing Ethics Education

What is computing ethics?

- My personal definition: understanding how the technology we create impacts society (and crucially, how societal values prioritizes the development of certain technology).

My recent research:

- CS195 (Social Implications of Computer Technology)

- Do students care? How do we get them to care?

About the Course

Lecture, Videos, and the Textbook

Videos posted to c88c.org are essential viewing **before** coming to lecture. All of the course content will be covered in the videos.

The textbook, composingprograms.com, is written to be concise and useful. Its content is very similar to the videos.

Lecture Mon & Wed will review *the most important content* from the videos (but not all of it), work through examples, and discuss problem-solving strategies.

Problem-Solving Practice

Solving problems is an effective way to learn how to solve problems.

Lab: attendance is required (unless you're in the self-paced mega lab).

You'll get an update from your TA, discuss problems in groups, then work on the lab.

These prepare you for weekly **homework** assignments & 2 larger programming **projects**

Drop-in one-on-one assignment help (called **"office hours"** at Cal) starts next week.

This Week Only: If you didn't have lab (or didn't make it to lab), review the Discussion 0 handout and complete Lab 0 on your own.

What does a "discussion" look like?

Expectation   *Reality*

Goal: Provide a great environment to learn how to solve problems through practice & *discussion*

I've seen small groups of Cal students do amazing things!

Lab (Starts This Week)

Unless you've elected the mega lab...

- You should have a group number shared with the 6–8 students in your group within your lab. There will be 2–7 groups per room, so make sure you find the right group.

What happens during the discussion portion of lab?

- You're given a worksheet full of example problems to solve together & some instructions.

- The point is not just to solve those problems, but to learn how to solve similar problems.
  - Discussion problems aren't graded; you don't have to solve them all.

- Bring a laptop or tablet.

What happens after the discussion portion of lab?

- Work through the programming problems in the week's lab assignment. You're welcome to work with others and ask for help from your TA.

Asking Questions

?

Ed: You can reach all staff (private posts) and all students (public posts)

denero@berkeley.edu: Don't be surprised if I ask you to post on Ed

cs88@berkeley.edu: Goes to several staff members

What is This Course About?

A course about managing complexity

  Mastering abstraction

  Techniques for organizing complex programs

An introduction to programming

  Full understanding of Python fundamentals

  Large projects to demonstrate how to manage complexity

Different types of languages: Python & SQL

Should you take Data C88C?

According to the Syllabus: c88c.org/fa24/articles/about-c88c/

There is no formal programming-related prerequisite for Data C88C, but...

- Taking the course without any prior programming experience is typically quite challenging.

- Students who take the course without prior programming experience typically must spend more time to complete assignments.

- If you find it challenging to complete all of the required coursework in the first three weeks, we strongly recommend that you take another course first.
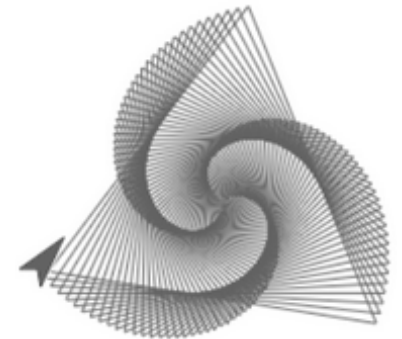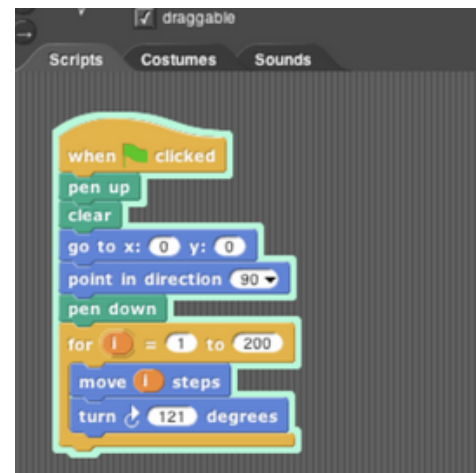
CS 10: The Beauty and Joy of Computing

Designed for students without prior experience

A programming environment created by Berkeley, now used in courses around the world and online

An introduction to fundamentals (& Python) that sets students up for success in Data C88C and CS 61A

More info: http://cs10.org/

CS 61A

Data C88C is based on CS 61A, but covers only 3 out of 4 units worth of the content:

- Two programming projects (instead of four)

- Everything you need to know to continue on to CS 61B

- Omits the unit on how programs run other programs & a few advanced Python topics

Course Policies

Learning

Community

Details...

c88c.org/fa24/articles/about-c88c/

Collaboration

Working together is highly encouraged

- Discuss everything with each other; learn from your fellow students!
- Some projects can be completed with a partner

What constitutes academic misconduct?

- *Please* don't look at someone else's code!
  Exceptions: lab, your project partner, or **after you already solved the problem.**
- *Please* don't tell other people the answers! You can point them to what is wrong and describe how to fix it or show them a related example.
- *Please* don't ask ChatGPT or other similar tools to write code for you.
- Copying project solutions causes people to fail the course.

Build good habits now

Let's Stop Harassment & Discrimination

Disparaging remarks targeting a particular gender, race, or ethnicity are not acceptable.

From the Berkeley Principles of Community:

"We affirm the dignity of all individuals and strive to uphold a just community in which discrimination and hate are not tolerated."

From the EECS department mission:

"Diversity, equity, and inclusion are core values in the Department of Electrical Engineering and Computer Sciences. Our excellence can only be fully realized by faculty, students, and staff who share our commitment to these values."

denero.org/feedback.html: If you want to stay anonymous but make me aware of something happening in the course.

EECS Student Climate & Incident Reporting Form: Informs the EECS department of any issues. You can also contact Susanne Kauer (skauer@berkeley.edu) directly.

Expressions

An expression describes a computation and evaluates to a value

$$\frac{6}{23}$$

$$\sin \pi$$

$$\log_2 1024$$

$$2^{100}$$

$$f(x)$$

$$\sqrt{3493161}$$

$$7 \bmod 2$$

$$\sum_{i=1}^{100} i$$

$$\lim_{x \to \infty} \frac{1}{x}$$

$$|-1869|$$

$$\binom{69}{18}$$

Call Expressions in Python

All expressions can use function call notation

(Demo)

Demo