# Dante Dam

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Coder, engineer, scientist; connecting computing to the scientific problems of the present and future.

I focus on biological and biochemical modeling and how they inform our study of life.

### Education

- Computer Science, University of California, Irvine, September 2024-2025 (4.0 GPA)
- previously Computer Science with honors, California State University, Los Angeles, August 2022-June 2024 (4.0 GPA)

## Research

- September 2024-present under Professor Kevin Thornton in Ecology and Evolutionary Biology at UC Irvine: calculation of **population genetics statistics** from individual-level genotypes and tree sequence encoded ancestral recombination graphs with a **new software library in Rust**. Entry into and funded via UCI's UROP fellowship; oral and poster presentation at Undergraduate Research Symposium in spring 2025
- October 2023-present under Professor Andres Aguilar in Biology at CSU Los Angeles: First genome sequence of the spotted sand bass Paralabrax maculatofasciatus and chromosomal synteny with black sea bass Centropristis striata. This ought to be on GenBank and in the Journal of Heredity soon.
- September 2023-June 2024 under Monica Barsever: **computational protein design** for capture of environmental PFAS using protein large language models and protein-ligand docking software

# Scholarships

UCI Alumni Association Endowed Scholarship UC Regents' Scholar

## Work

### Barnabas Innovation Group Intern

Barnabas Robotics Remote and Pasadena, CA

• During summer 2021, led team of undergraduate interns and taught them Git

• Afterwards, migrated Barnabas Blocks, an open-source, block-based, full toolchain web IDE for Arduino microcontroller hardware, to TypeScript and webpack. Continue to maintain code and cloud deployment.

#### Peer Mentor, Early Entrance Program

June-July 2023

July 2021 - Present

Honors College, CSU Los Angeles

Los Angeles, CA

• Developed, taught curriculum for applicants aged 11-15; some are offered early admission to CSU Los Angeles as full-time university students.

#### Volunteer Team Member

2019-2022

HopeIT (nonprofit)

Pasadena, CA

• Developed course on game design in Roblox and supported day-to-day class sessions, instructing students from group foster homes

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### Extracurriculars

#### Member, Academic and Alumni Affairs Committee

November 2024-present

ICS Student Council

UC Irvine

- Design curriculum and manage LeetCode study groups with about 150 students, teaching interview problem motifs with weekly written lectures
- Contributor to backend for ICSSC's AntAlmanac and PeterPortal, UCI's most popular schedule and degree planner

Treasurer August 2023-June 2024

Biomedical Engineering Society

CSU Los Angeles

- Raise and disburse funding for club projects
- Manage biometrics project working on pulse oximetry

### Hackathons

Mentor, ICS Student Council WebJam 2024, UC Irvine

Presenter, Hack@UCI IrvineHacks 2025, "Cloud hosting and persistence with Mongo and Railway"

## Projects

TrackGauge December 2023 - Present

REST, Node.js, webpack

live site

• Tracks locations of LA Metro trains in real time, with past stop times and future stop time forecasting

Numberlink solver July 2024

Rust, graph theory, Boolean satisfiability

• laggycomputer/permanganate

• The objective of Numberlink is to connect pairs of cells on a grid without crossing paths; solver completes published puzzles in milliseconds

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