

Matty Last

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Education

Prestigious University

Los Angeles, CA | June 2028

B.S. in Computer Science

GPA: 4.0/4.0

Coursework: Software Engineering, Object-Oriented Programming, Data Structures & Algorithms, Networks, Discrete Math, Linear Algebra, Probability & Statistics, Calculus

Skills

Languages: C/C++, Python, JavaScript/TypeScript, HTML/CSS, SQL/noSQL

Tools: Git/GitHub, Unix/Linux, Flask, React, Next.js

Experience

Software Research (PhD) | Research Assistant

Los Angeles, CA | June 2024 – Present

- Assist in software development and research of data structures & algorithms representation for education, debugging, etc.
- Using Python (ast, tokenize, sys.trace), JavaScript (PyScript, CodeMirror), LaTeX (writing formatting)

Competitive Programming Club | President

Los Angeles, CA | Sept 2023 – Present

- Have made and present 30 data structures & algorithms slideshows for technical interviews and competitive programming
- Coordinate mock interviews and contests for >50 students by writing problems, managing collaboration, advertising, etc.

Data Structures & Algorithms | Teaching Assistant

Los Angeles, CA | Apr – June 2024

- Help manage this upper division course with assistance and the grading of 30 students
- Covers algorithm design (divide-and-conquer, greedy, DP) and analysis (asymptotic notation, recursive/non-recursive, P/NP)

Projects & Awards

ICPC Pacific Northwest Regional 2024

Feb 2024

- 2nd Place / 100 Participants, California D1; Represented Prestigious University in the most prestigious programming contest

Sigma Scholar | Flask (Python), Next.js (React (TypeScript, HTML/CSS), Tailwind CSS), Chroma DB, Beautiful Soup, LlamaIndex, OpenAI API

Feb 2024

- 2nd Place & \$1,250 / 300 Participants, Humanitarian Hack 2024
- Made scholarships more accessible by creating a website that allows you to search, sort, and filter through them
- Collaborated in creating a RAG LLM data ingestion pipeline with Flask (Python), that uses LlamaIndex and the OpenAI API to perform AI-assisted data mining on thousands of web pages with Beautiful Soup web scraping and a Chroma DB database
- Created the frontend for the chat interface with the AI advisor using React (TypeScript) and Tailwind CSS

Carbon | Flutter (Dart), Supabase, INRIX API, Google Maps API

Nov 2023

- Honorable Mention / 300 Participants, Eco Hack 2023
- Incentivized sustainability by making a social media mobile app to gamify eco-friendliness using the INRIX API
- Created backend communication with the INRIX and Google Maps API in Dart, and assisted frontend design and UI/UX

PU Schedule Helper | JavaScript, HTML/CSS, Chrome Extension, Flask (Python), Beautiful Soup

Mar 2024 – Present

- Used by 200 students, who I collaborate with to get feedback and suggested features
- Made registering for courses accessible by inserting professor ratings and color coding into the web page's HTML DOM
- Web scrapes from Rate My Professors and Prestigious University Course Evaluations using API calls, Beautiful Soup, and Xpdf

Hi-Five | JavaScript, React Native (JavaScript, HTML/CSS), Firebase, Spotify API

Apr – June 2024

- Made music sharing more gratifying and convenient by making a social media mobile app for a software engineering course
- Designed the users/posts database with Firebase, and Spotify Web API interaction, e.g. OAuth2.0 authorization, in JavaScript

ChatBuzz | TypeScript, HTML/CSS, Twitch API

May 2023 – Present

- Used by >10 livestreamers, who I collaborate with to get feedback and suggested features
- Improved Twitch livestreaming experience by creating a web application that displays repeated chat messages on OBS
- Designed a process to fetch and render emotes in real-time with big data and minimal latency in TypeScript

Extracurriculars

Philanthropic Charity | Manager

Los Angeles, CA | Aug 2017 – Present

- Involved in multiple charities, earned an award for philanthropic hours spent; Give away >100 stocked backpacks annually

VALORANT Champions 2024 | Participant

Aug 2024

- 2nd Place & \$400,000; Previously, led high school's eSports club with training plans, coordinating matches, etc.