

Adarsh Patel

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EDUCATION

University of California, San Diego

La Jolla, CA

Bachelor of Science in Computer Science

Sep 2022 - June 2024

- **Relevant Coursework:** Advanced Software Engineering, Computer Graphics, Full-Stack Web Development, Computer Operating Systems, Computer Security, Databases, Working with Large Codebases
- **GPA:** 3.73

EXPERIENCE

UCSD Computer Science & Engineering

La Jolla, CA

Lead Software Engineering Instructional Assistant

Mar 2024 - June 2024

- Led a team of 6 tutors to provide technical support to 400 students through Slack and office hours.
- Reinforced students' understanding of web development best practices by leading hands-on projects in Agile frameworks, resulting in a 40% improvement in their code quality and teamwork efficiency.
- Developed multiple auto-graders using **Python** decreasing grading turnaround times by 80%.

PROJECTS

Coffee Recipe Rater | *HTML, CSS, JavaScript, Node.js, Supabase, Cloudflare, Prisma*

Mar 2024 - June 2024

- Refactored **HTML** and **CSS** to use valid and semantic syntax improving responsiveness and load times by **20%**.
- Utilized **Jest** and **Puppeteer** to create **E2E testing** significantly improving code quality and reliability.
- Integrated front-end and back-end systems by developing **RESTful APIs**, resulting in a 40% reduction in page load times and improving user experience significantly

Python IDLE Codebase | *Python*

Mar 2024 - June 2024

- Led a team of 3 developers to add a scratchpad feature using **Python** to the IDLE codebase.
- Directed communication, issue creation and sprint management in **GitHub** speeding up workflow by ~30%
- Implemented unit and human testing using Python's unittest and mock libraries.

Boids Animation | *C++, OpenGL, GLSL*

Sep 2023 - Dec 2023

- Developed an algorithm to render 2D and 3D objects using **C++** by transforming triangle meshes in **JSON** and **PLY** files from object space to screen space.
- Optimized rendering times **over 200%** using **OpenGL** and **GLSL** on custom created objects in **Blender** with millions of triangle meshes.
- Created a basic **animation**, based off the concept of boids by using two **fragment shaders** and multiple force equations in **Shadertoy**.

Origami Fortune Teller | *HTML, CSS, JavaScript*

Apr 2023 - June 2023

- Led a team of 9 developers through **SDLC** of a greenfield web application using **HTML**, **CSS** and **JavaScript**.
- Implemented a robust **CI/CD** pipeline integrating **linting**, **Code Climate**, automated E2E and unit testing with **Puppeteer** and **Jest**, and **JSDocs** for efficient development and deployment.

Analytics Dashboard | *HTML, CSS, Node.js, PHP, MySQL, Apache, Digital Ocean*

Apr 2023 - June 2023

- Created a web server using **Apache** to collect and visualize users' performance and activity data.
- Engineered a **RESTful API** using **Node.js** to store and retrieve user data efficiently from a **MySQL** database.
- Utilized **PHP** to extract data and enable authenticated users to perform **CRUD** operations on an user management table and interactive charts.

TECHNICAL SKILLS

Languages/Frameworks: JavaScript, HTML/CSS, Node.js, Python, C++, Java, GLSL, MySQL, PHP, Jest/Puppeteer, SystemVerilog, x86, React, C#

Developer Tools: Git, Linux, Visual Studio, OpenGL, Blender, ModelSim, Quartus, DESim, Supabase, CloudFlare, Prisma