Adarsh Patel

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EDUCATION

University of California, San Diego — La Jolla, CA
Bachelor of Science in Computer Science — *Expected June 2024*

- **Relevant Coursework:** Software Engineering, Computer Graphics, Full-Stack Web Development, Principles of Computer Operating Systems, Introduction to Computer Security, Principles of Databases
- **GPA:** 3.73

Cypress College — Cypress, CA
Associate Degree for Transfer in Computer Science — *Aug 2020 – May 2022*

PROJECTS

Origami Fortune Teller | *HTML, CSS, JavaScript* — April 2023 – June 2023

- Led a team of 9 developers through the development life cycle of an Origami fortune teller web application using **HTML**, **CSS** and **JavaScript**.
- Utilized **Git** and **GitHub** extensively for maintaining version control, weekly sprints, and issue assignment, ensuring the team stayed organized and on track throughout the project.
- Established a robust **CI/CD** pipeline integrating linting, the **Code Climate** quality checker, a manual pull request review, automated testing using **Puppeteer** and **Jest**, and **JSDocs** for streamlined development and deployment.
- Practiced **Agile** and **Scrum** methodologies, including brainstorming, wire-framing, user personas, sprint reviews, retrospectives and daily stand-ups to foster collaboration and maintain project momentum.

Analytics Dashboard | *HTML, CSS, Node.js, PHP, MySQL* — April 2023 - June 2023

- Created a web server using **Apache** and **Digital Ocean** to track and visualize user's static, performance and activity data.
- Implemented a **RESTful API** using **Node.js** to store and retrieve user data efficiently from a **MySQL** database.
- Developed an authentication system using **HTML**, **CSS**, and **Node.js**, incorporating **JWT** authentication to provide secure access to a dashboard.
- Utilized **PHP** to extract data from a **MySQL** database, enabling authenticated users to perform **CRUD** operations on an user management grid and interactive charts powered by **ZingChart** and **ZingGrid**, providing insightful capabilities.

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 pipeline using **OpenGL** and **GLSL** improving render times by **over 200%** on custom created objects in **Blender** with millions of triangle meshes.
- Implemented advanced features using **GLFW** including lighting and an **user-interactive camera**, enhancing visual quality and providing an immersive experience through interactive camera movements.
- Created a basic **animation**, based off the concept of boids by using two **fragment shaders** and multiple force equations in **Shadertoy**.

TECHNICAL SKILLS

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

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

CERTIFICATIONS

International Peer Educator Training Program: Issued May 2022 from Cypress College