

Sergio Zavala

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EDUCATION

California State University Monterey Bay | Seaside, CA

Expected: May 2026

B.S. in Computer Science, Software Engineering

GPA: 3.86

- **Relevant Courses:** Data Structures, Programming Languages, Calculus I, Computer Architecture, Design and Analysis Algorithms, Intro to Database Systems

Codecademy | Full Stack Engineer Course

July 2024 - Present

- A full stack development course covering front-end and back-end technologies including HTML, CSS, JavaScript, React.js, Node.js, Express.js, SQL, etc. Developing multiple projects to apply skills in real-world scenarios.

Udemy | Spring Framework Course

July 2024 - Present

- Currently enrolled in a comprehensive Spring Framework 5 and Spring Boot 2 course, focusing on real-world applications, Reactive Programming, TDD, and CI with Docker integration. Gaining hands-on experience with industry best practices and modern development techniques.

CS++ Program

August 2022 - Present

- Served as a student ambassador and member in a four-year Computer Science program at CSUMB, renowned for enhancing graduate opportunities, with 76% of alumni securing industry employment post-graduation.

TECHNICAL SKILLS

Programming Languages: Java, Python, HTML/CSS, Javascript, SQL, Go, Swift

Tools: Git, CLI, Flask, Bootstrap 5, PostgreSQL, numpy, VSCode, IntelliJ, Docker, APIs, ReactJS, Node.js, SQLite, Django, Kotlin, SQLite, XML, MochaJS, ChaiJS, AngularJS, JSON

PROFESSIONAL EXPERIENCE

Software Engineer Fellow | Headstarter AI

July 2024 - Present

- The Headstarter AI fellowship is a 7-week virtual summer Software Engineering Program that enables students to work on industry-standard projects.
- We will be working on building 5 AI projects, participate in hackathons and launch a capstone project with the goal of acquiring 1,000+ users

Software Engineer Intern | Oppia

June 2024 - Present

- Collaborating with a team of 2 other students to fix issues on the back-end of Oppia, an open source website used by **1 million+** users to help underprivileged students around the world receive a quality education.
- Contributed by resolving a crucial bug enabling music playback for lessons, preventing duplicate tags with Angular and JavaScript, while also working on a personal project with my team using these new technologies.

AI Trainer | Outlier

June 2024 - Present

- Utilized LaTeX to accurately input and verify solutions to complex mathematical problems provided by a large language model, ensuring precision in educational content.
- Enhanced LLM effectiveness by developing and analyzing real-world coding prompts, and improving chatbot accuracy by identifying and correcting deviations in AI-generated outputs.

Software Engineer Intern | Open Energy Dashboard

January 2024 - February 2024

- Collaborated with a team of 2 other students to contribute to the back-end of OED, an open source dashboard used by a few government agencies along with **10k+** users that displays energy-related data ([Blog](#) on confronting issue).
- Developed and executed a **JavaScript** test case to verify data accuracy in the **PostgreSQL** database by comparing it with the application's API readings. Used the **Docker** environment to implement a test case. ([Pull request](#))

PROJECTS

[Econvert](#) | Python, Reflex

October 2023

- Developed a **Reflex** web application in **Python** to convert currencies given by the user to any virtual/physical currency of their choice.
- Front-end and back-end managed in **Python** and the conversions were requested from the togetherAI API.
- Implementing our API was my role in the team.

[Oil Converter](#) | *Python, Flask, Javascript, HTML/CSS*

December 2023

- Collaborated in creating a real-time oil price and currency conversion web app using **Python** with **Flask** backend and integrated APIs.
- Designed frontend with **Bootstrap** and **JavaScript**, ensuring seamless user experience and API functionality.

[Library App](#) | *Java, Kotlin, SQLite, XML*

December 2023

- Developed a fully functional Android library app using **Android Studio**, enabling user account creation, book checkouts, and administrative management of transactions and book inventory.
- Built with **Java/Kotlin**, integrated with a **SQLite** database to handle data storage and designed using **XML**.

[AITeacher](#) | *Django, Python, HTML/CSS, Javascript*

July 2024

- Developed an advanced educational platform providing interactive and adaptive learning experiences. Implemented features such as dynamic quizzes and real-time feedback.
- Built with **Django** for the backend, used OpenAI REST API to generate questions and options, and utilized **JavaScript** and **jQuery** for a responsive frontend.

[Shiny Tracker](#) | *ANGULAR, TYPESCRIPT, HTML/CSS, TYPESCRIPT, EXPRESS*

July 2024 - August 2024

- Developing a web application to enhance shiny Pokémon hunting by providing real-time tracking and statistical analysis tools for players, using Angular for a dynamic frontend and Express for a scalable backend.
- Utilizing **TypeScript** for type safety and robustness, combined with **HTML/CSS** and **JavaScript** to create an intuitive UI that tracks encounters and calculates shiny encounter rates, enriching the gaming experience.

RESEARCH EXPERIENCE

CURE (Course-based Undergraduate Research Experience) Project | Undergraduate Research

March - May 2023

- Part of an undergraduate team that conducted research on L-shaped standard young tableaux.
- Learned how to use libraries for search, how to formulate a conjecture, collaborate/communicate, demonstrate appropriate proof methodologies, etc.
- As an independent researcher within the group, I successfully conducted the formal proof of the L-shaped diagram by creating a supporting equation. I was also in charge of organizing our group's deep work sessions.