

Ethan Santos

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EDUCATION

University of California, Irvine

Irvine, CA

B.S., Computer Science

December 2025

- **Relevant Coursework:** Data Structures and Algorithms, Data Management, Computer Organization, Object Oriented Programming, User Experience/User Interfaces, Web Application Development, Software Testing, C/C++ Programming
- **Organizations:** FUSION at UCI (Technical Lead), ZotBins Research Team (Developer)

EXPERIENCE

Software Engineer Intern | Amway

May 2025 – Present

- Implemented custom prom-client counters, gauges, and histograms in identity backend microservices using TypeScript and Fastify to track authentication flow data, delivering real-time insights and reducing incident troubleshooting time by 40%.
- Developed advanced PromQL queries for a Grafana dashboard to provide granular visualization of authentication metrics by client type and outcome, improving monitoring accuracy by 35% and reducing issue detection time by 35%.
- Engineered end-to-end Playwright tests for 30+ authentication scenarios, integrated into our GitHub Actions CI/CD pipeline, reducing manual regression testing effort by 50%.

Full Stack Developer | UCI ZotBins Research Team

October 2024 – Present

- Integrated the Mapbox Directions API with Expo Location to provide real-time navigation, automatically determining the nearest ZotBin based on the user's coordinates and offering walking directions, improving user convenience by 30%.
- Developed a real-time leaderboard system using React Native and Firebase, dynamically managing user rankings based on points, increasing user retention by 25% and boosting app engagement by 30% through competitive gamification.
- Programmed an XP-based progression system leveraging Firebase timestamps to track daily activities, awarding dynamic XP for quiz participation, item scanning, and first daily logins, enhancing user engagement and retention.

Software Engineer Intern | Blue Social

June 2024 – May 2025

- Integrated an iOS app into React Native, utilizing Swift bridge modules and Thirdweb's React hooks to implement blockchain functionalities, enhancing user engagement by 25% through tokenized rewards for social interactions.
- Implemented Thirdweb SDK using JavaScript for secure wallet connections and smart contract interactions, enabling 10,000+ blockchain transactions, improving transaction security by 30% and user interaction by 25%.
- Optimized wallet data retrieval protocols by integrating Basescan API and Axios, reducing latency by 60% for 1,000+ beta users during blockchain operations and improving real-time currency conversion accuracy.

Technical Founder | AIMSTARS

June 2020 – March 2024

- Launched a first person shooter game programmed in Lua with 9.5 million plays, 15,000 monthly active users, and over \$30,000 in revenue, driven by engaging gameplay and effective in-game monetization.
- Designed AI-driven bots using the Pathfinding Service for human-like movement, incorporating obstacle avoidance and dynamic path recalculations, boosting player engagement by 40% and retention rates by 25%.
- Implemented a global leaderboard system with ProfileService, managing real-time score updates for 100+ concurrent players, resulting in a 35% increase in user engagement and competition.

PROJECTS

Pyro.AI | NextJS, Flask, TypeScript, Python, YOLOv8, Tensorflow, Tailwind, ShadCN

February 2025

- Developed a fullstack wildfire dashboard that integrates YOLOv8 for fire detection and OpenRouteService for safe routing.
- Engineered a Flask endpoint to process images, fetch OpenMeteo data, and compute risk with our trained CNN model.

NagaGuard | React, Flask, MySQL, Python, JavaScript, Bootstrap, Gemini AI

April 2024

- Developed a full-stack web app that transcribes medical records into clinical codes, reducing medical coding time by 99%.
- Set up a SQL database with stored procedures to manage 200+ of medical records, patient data, and user authentication.

AWARDS

1st place | LA Hacks - Roblox Company Challenge | Project: Bloom.AI

April 2025

1st place | Coinbase OnChain Summer Buildathon | Project: Blue Social

August 2024

1st place | UCR BearHacks - Best Startup | Project: NagaGuard

April 2024

1st place | Roblox x USC Game Jam - Best User Experience | Project: Mystical Memories

March 2024

TECHNICAL SKILLS

Languages: JavaScript/TypeScript, Java, Python, SQL, C, C++, Swift, Lua, PromQL, HTML, CSS

Other: Next.js, React/React Native, Flask, FastAPI, JUnit, jQuery, AWS, Docker, Node.js, Git, Fastify, Prometheus, Agile