

Jaden Ong

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EDUCATION

San Diego State University — B.S. in Computer Science Expected May 2027
GPA: 3.95 — *Data Structures & Algorithms, Cloud Computing, Database & Web Programming, Machine Learning, Operating Systems, UNIX System Administration*

SKILLS

Languages: Python, Java, C/C++, SQL, JavaScript/TypeScript

Frameworks: Next.js, Spring Boot, FastAPI, Node.js, Express.js, React

Developer Tools: Git, Docker, Linux, CLI, PostgreSQL, RESTful APIs, CI/CD (GitHub Actions)

WORK EXPERIENCE

Research Assistant — Real-Time Embedded & Controls Systems (RTEC) Lab Jan. 2025 – Present

- Built **C++** localization systems for autonomous vehicles, improving lap times by **15%** over **100+** runs
- Integrated **Isaac ROS vSLAM** for vehicle localization; tested with rosbags and RViz using 2D/3D point-cloud
- Added an obstacle detection module with a team of **5+** to validate performance in localization and control

Instructional Student Assistant — San Diego State University Aug. 2025 – Present

- Graded **100+** algorithms/data structure assignments with detailed feedback on code quality and efficiency
 - Reduced manual grading by **30%** by creating test cases for automated grading system
 - Created LeetCode-style exam questions with autograder tests for graphs, divide-and-conquer, and DFS/BFS
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LEADERSHIP EXPERIENCE

Vice President — App Development Club Aug. 2024 – Present

- Led workshops on **Git, React, Vue, Next.js, and Spring**, guiding **20+** members in full-stack development
 - Presented on REST APIs, Spring Boot, and deployment, helping members better interview and project skills
 - Led **15+** building a non-profit farmers market website with auth, database, multi-role login, and payments
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PROJECTS

DevTrackr — Task Management Backend Service *FastAPI / PostgreSQL / Docker*

- Developed a **RESTful API** with **PostgreSQL** and SQLAlchemy ORM for secure, persistent task management
- Implemented **JWT** authentication and analytics for task summaries, category trends, and weekly insights
- Automated CI/CD with Docker Compose, pytest, and **GitHub Actions** for reliable deployment

The Crash App — Innovate 4 SDSU Hackathon Project *Next.js / TypeScript / Tailwind / React.js*

- Built a **Next.js/TypeScript** app for hit-and-run reporting with image uploads and plate/timestamp data
- Designed structured backend storage with plate-lookup and verification workflows to validate reports
- Implemented a “Crash Coins” reward system to incentivize accurate reporting and boost engagement

PrepPal — AWS x Cal Poly DxHub Hackathon Project *Node.js / Express / React / Docker*

- Built a full-stack AI interview coach using **Next.js** and **FastAPI**, with AWS **S3/DynamoDB/Bedrock**
- Implemented real-time audio/video processing pipelines using STT, TTS, and OpenCV for fast feedback
- Developed resume-driven question generation and structured session APIs for consistent interview flows

AlgoCoach — LeetCode Practice Tracker *Spring Boot / Java / REST API*

- Developed a **Spring Boot** backend to analyze LeetCode submissions and track user performance trends
- Enabled progress tracking and personalized study insights to improve problem-solving efficiency

Code Box — Secure Code Execution Platform *Node.js / Express / React / Docker*

- Built a RESTful **Node.js/Express** enabling secure code execution in isolated **Docker** containers
- Designed an interactive React interface with syntax highlighting, live I/O feedback, and streamlined UX