

# 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*

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## 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)

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## 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