

Jaden Ong

858-603-6535 / jong6319@sdsu.edu / <https://www.linkedin.com/in/jadengong/> / <https://github.com/jadengong>

EDUCATION

San Diego State University

Aug 2023 – May 2027

Bachelor's of Science (B.S.), Computer Science

GPA: 3.95

Relevant Coursework: Data Structures, Algorithms, Operating Systems, UNIX System Administration, Computer Architecture/Organization, Database Theory and Implementation

SKILLS

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

Frameworks: React, Next.js, FastAPI, SQLAlchemy, Tailwind CSS

Tools & Platforms: Git, GitHub Actions (CI/CD), pytest, pydantic, jest, Docker, PostgreSQL (Postgres), Vercel, Alembic, REST APIs, Linux

EXPERIENCE

Real-Time Embedded & Control Systems (RTEC) Lab – *Research Assistant*

Jan 2025 – Present

- Enhanced **open-source path planning algorithms** in **ROS2** with **C++/Python**, improving lap time efficiency by **15%** and enabling smoother navigation across **100+ autonomous driving trials**
- Integrated **Isaac ROS VLM** with **YOLO**-based perception in ROS2, combining vision-language understanding with object detection to improve overtaking decision-making
- Tested and debugged autonomous vehicle software across **20+** hours of simulation and field runs using **ROS2** and virtualization tools, resolving **5+** critical system crashes to ensure consistent performance

San Diego State University – *Instructional Student Assistant*

Aug 2025 – Present

- Reviewed and returned feedback for **60+ students** across programming and theory assignments, helping them strengthen understanding of fundamental algorithms and coding interview preparation topics
- Evaluated student implementations of **divide and conquer**, **dynamic programming**, **greedy**, and **graph algorithms** in **Python**, providing detailed written feedback that improved student coding accuracy and efficiency
- Graded paper-based assignments on **recurrence equations**, **asymptotic growth**, and **NP-completeness** using standardized rubrics, ensuring consistency and reinforcing course learning objectives

App Development Club – *Vice President*

Aug 2024 – Present

- Led **technical workshops**, **lectures**, and **collaborative coding events** on **React**, **Vue.js**, and **Next.js**, enabling **20+** members to gain hands-on experience building **full-stack applications**
- Prepared materials and gave talks on **TypeScript**, **RESTful APIs**, and deployment workflows, helping members improve technical interview readiness and project skills
- Coordinated **guest speaker sessions** with professionals from industry and academia, providing **30+** students with exposure to real-world SWE practices and career insights

PROJECTS

Task Management Web Application

FastAPI | PostgreSQL | Docker

- * **Designed and implemented** a **RESTful API** with **FastAPI** and **SQLAlchemy** ORM, enabling users to create, update, and analyze tasks with secure data persistence in **PostgreSQL**
- * **Integrated JWT authentication** to provide summaries, category breakdowns, and weekly performance metrics, improving user insight into task completion and time management
- * **Containerized services and automated workflows** using **Docker Compose**, **pytest**, and **GitHub Actions**, delivering a reproducible environment with continuous integration testing

Secure Code Execution Platform

Node.js | Express | Docker | React

- Developed a full-stack code execution sandbox using **Node.js** and **Express.js**, with a **RESTful API** to receive, and enqueue user-submitted code for execution with modular backend design for future language support
- Built a dynamic and interactive frontend UI in **React** with syntax-highlighted code editing, live I/O display, and clean UX for seamless user interaction within a single-page application
- Integrated **Docker** to provide secure execution of untrusted code in isolated containers with required timeouts and memory limits, leveraging containerization for environment consistency, resource management, and secure execution

Automated Centralized Logging Setup

Ansible | Syslog | Unix

- Developed **Ansible playbooks** to configure **syslog forwarding and permissions** across heterogeneous Unix systems, ensuring consistent and secure log aggregation
- Automated deployment and verification** of logging configurations, reducing manual setup time by **80%** and improving reliability of system audits