Angel Arturo Ruiz

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EDUCATION

University of California Irvine

B.S. Computer Science *Irvine, CA*

- **Courses:** Files and Databases, Modern Web Development, Object Oriented Programming, Mobile Operating Systems, Computer Organization, Data Structures, Algorithms & Analysis, Foundations of Programming

TECHNICAL SKILLS

Languages: C++, Python, Java, JavaScript, HTML, CSS
Frameworks/Tools: Git, Docker, VS Code, Figma, LiveKit, Google Gemini API, Arduino, APIs (REST, Web & Weather APIs)
Databases: SQL, Firebase

RELEVANT EXPERIENCE

N.A.S.A California Space Grant Consortium **May 2023 - Oct. 2023**

MicroComputer & Robotics Intern *Edwards, CA*

- Designed and programmed an **Autonomous Lunar Rover** using Arduino microcontrollers and multiple sensors
- Developed custom algorithms for rover **localization, path planning, and decision making**, improving navigation reliability.
- Collaborated in a 4 person team to **prototype, test, and refine rover functionality** in simulated space environments.
- Implemented **real-time data logging and telemetry systems** for monitoring and debugging.

Victor Valley Union Highschool District **Aug. 2021- May. 2022**

A.V.I.D Tutor *Victorville, CA*

- Monitored and documented over 200 students progress, providing regular feedback and performance updates, Communicated consistently with students and parents about academic goals and challenges.
- Created custom educational resources and practice materials for targeted learning improvements

PROJECTS

Multimodal A.I ChatBot | *Personal Project* **Present**

- Built an AI assistant using Google Gemini API capable of real time voice and video interaction
- Integrated web search and weather APIs to enable the assistant to fetch live data and respond dynamically
- LiveKit for live audio/video communication, enabling dynamic conversations with visual input
- **Currently** working on extending my multimodal chatbot into a physical “personal butler” prototype, using a 3D Printer, Arduinos, motors, and sensors to bring AI everywhere I go.

Full Stack Rag Application| *Personal Project* **Apr. 2025**

- Designed and implemented a Retrieval Augmented Generation (RAG) system with **FastAPI**, **Postgres**, and **OpenAI embeddings**.
- Built secure user authentication, document ingestion (upload + chunking), and semantic search with vector embeddings.
- Developed chat endpoints that retrieve relevant context and generate answers with **GPT 4o**.
- Containerized services with Docker and managed schema migrations using Alembic.

Autonomous Rover | *NASA Project* **May 2023**

- Designed and built an autonomous rover using Arduino and sensors including LiDAR, TOF, altimeter, accelerometer, and air quality modules
- Programmed rover behavior for obstacle avoidance, terrain detection, and environmental data collection
- Implemented real time data logging and telemetry systems for remote monitoring and debugging