

Ryan King

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EDUCATION

University of California, Santa Cruz

Bachelor of Science in Computer Engineering, Minor in Computer Science

Santa Cruz, CA

Sep. 2021 – Present

La Cañada High School

GPA: 4.2

La Cañada Flintridge, CA

Aug. 2017 – June 2021

EXPERIENCE

Group Tutor

UC Santa Cruz, Computer Science and Engineering Department

Sep. 2023 – Present

Santa Cruz, CA

- Tutor for CSE121 (Embedded System Design), CSE13S (Comp Sys and C), and CSE20 (Programming in Python)
- Assists TAs in discussion sections and held office hours
- Helped 500 students up to 20 hours per week (between all 3 classes)

Reader/Grader

UC Santa Cruz, Computer Science and Engineering Department

Sep. 2022 – Dec. 2023

Santa Cruz, CA

- Course grader for CSE 20 (Beginning Programming in Python)
- Graded about 100 Python programming assignments per week

Small Group Instructor

iD Tech Camps

May 2022 – Jan. 2019

Remote (Los Angeles)

- I taught week-long coding classes to students between 1st and 12th grade with class sizes of up to 12 students.
- I taught Python, Java, HTML and JavaScript, C++, C#, AI, and game design tools
- Game design tools were RPG Maker, Unity, Roblox, and more basic games using C++, PyGame, and HTML/JS

PROJECTS

Datum - AI-powered knowledge base | *Next.js, Figma, Firebase, GenKit, Ollama* Sep. 2024 – December 2024

- In a team of 6, I helped develop an AI knowledge base website for companies with many documents.
- Fully functioning website that allows an admin of a company to create new users and assign them departments
- Users can upload documents to a department database and access department files they are privileged to see.
- Selfhosted Llama3.2 model is used instead of OpenAI, so important documents are protected, and not used for training
- The chat tool can summarize a document or have a conversation based on documents a user can access.

LCUSD Zoom Attendance Bot | *Python, Google Classroom/Sheets/Gmail/Zoom APIs* Sep. 2020 – May 2021

- Developed and maintained a bot that tracks attendees in all school district Zoom meetings. It automatically fetched student rosters from Google Classroom to cross-check attendance for all classes and email attendance reports.
- Automatically sends around 300 emails per day with attendance reports for each class a teacher holds.
- Automatically fetches data from Google Forms to check classes for teachers who opt-in to get email reports.

Hand-Tracked Mouse Cursor

C#, Python, Android SDK, Android NDK, Unity, Oculus XR, Oculus VR Toolkit, OpenJDK, PyAutoGUI

Feb. 2021 – May 2021

- App for Oculus Quest and PC that uses hand tracking to control a computer mouse without wearing the headset.
- The Quest mounts behind a chair and relays hand position and gestures to a local Python script on PC via ADB.
- In addition to clicking, the app on the Quest supports 4 custom gestures including opening an on-screen keyboard.

TECHNICAL SKILLS

Languages: Python, Java, C/C++, JavaScript, HTML/CSS, WebGL, MySQL, C#, MatLab, Verilog, RISC-V

Frameworks: Next.js, Vue, React, Node.js, Flask, FastAPI, Jekyll, Arduino, Espressif IoT Development Framework

Developer Tools: Git, Docker, Jest, Firebase, Google APIs, Android SDK & NDK, Unity, OVR Toolkit, VS Code, Visual Studio, PyCharm

Libraries: OpenCV, PyTorch, Scikit-learn, pandas, NumPy, PyGame, Selenium, SciPy, discord.py, Matplotlib, Three.js

Other Skills/Experience: IoT Development, Linux, FPGA and Logic Design, Robotics, Small System/Network Admin