Shenai Chan

Sunnyvale, CA

WEBSITE // LINKEDIN // GITHUB // SHENAIWC@GMAIL.COM // (972) 979-1279

EDUCATION

Carnegie Mellon University   **May 2024**
B.S. Electrical & Computer Engineering, minors in Physical Computing & HCI   GPA 3.8

EXPERIENCE

Recurse Center   **Aug 2024 – Nov 2024**
Programming Retreat Participant

Developed web and hardware projects (see selected projects for more). **Organized** a physical computing **discussion group** and a **series of talks/workshops** aimed at introducing software programmers to hardware. Gained familiarity with OCaml, Go, Rust, and Haskell.

HARP Lab at CMU   **May 2023 – May 2024**
Full-Stack Developer & Research Assistant

Project lead for online multiplayer user study using **Flask, Socket.io, SQL/SQLAlchemy, JavaScript,** & **HTML/CSS**. Consulted on **study design** and algorithmic implementation of project aimed at **transparency** in **human-AI interactions**.

TRACES Lab at CMU / Center That CARES   **May 2022 – Aug 2022**
Teacher & Research Assistant

Helped **design** and **teach** creative engineering program with a focus on **co-design** with lower-income students and communities. Researched development of a **low-cost** suite of tools for introducing students to **physical computing** and programmatic thinking.

SELECTED PROJECTS

Notes From Afar | Live Site | Documentation & Code   **Aug 2024 – Oct 2024**
Designed, programmed, user tested, and deployed fully-functional web application where users can leave anonymous notes about their long distance relationships, using **Python, Django, Django Ninja** (RESTful API design), **TypeScript, React, HTML/CSS, MapBox API, OpenAI API, PostgreSQL,** and **Render**.

Hestia: a Home Assistant | Documentation & Code   **Sep 2024 – Oct 2024**
Built custom home assistant with voice interface on a **Raspberry Pi,** using **Python, Flask, TypeScript, React,** and **HTML/CSS** for an LAN-exposed dashboard, a **Picovoice** wake word model, **Azure** speech transcription & synthesis, **OpenAI API, Spotify API,** and a **Mosquitto MQTT** broker for process communication.

Real-Time Operating System   **Feb 2024 – Mar 2024**
Designed and programmed a **real-time reservation kernel** with **rate-monotonic scheduling** and **mutexing/ immediate priority ceiling protocol** to manage multiple threads and shared resources. Code available upon request.

Guide Robot for Honda Research Institute   **Jan 2024 – May 2024**
Spearheaded **needs-finding, literature review,** and **storyboarding** processes and **presented work to stakeholders** at Honda. Programmed **LLM-powered voice assistant** for context-aware navigation vocal interface. Led integration of **IoT network** into navigation website.

SKILLS

Python, Django, Flask, TypeScript/JavaScript, React, HTML/CSS, Figma, User Testing, C, Embedded Systems