

Vivian Li

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Education

Tufts University GPA: 3.99

Medford, MA, USA

Majors: Computer Science, Cognitive and Brain Science

September 2020 - May 2024

Courses: Software Engineering, Simple Virtual Machine, Internet-Scale Distributed System, Compiler, Machine Structure and Assembly Language, Algorithm, Programming Language, Data Structure, Web Programming, Machine Learning, Computational Models in Cognitive Science

Experience

Sonos Inc.

Boston, MA, USA

Software Engineer Intern

Kotlin, Compose Multi-platform, Gradle, Mockk, Koin

June 2023 - Aug 2023

- Designed architecture for a Compose Desktop application using MVVM pattern and SOLID principle.
- Built a fully functional app to set up Sonos speakers and control synchronized playback among multiple speakers.
- Achieved 90% unit test coverage on business layers with Mockk library. Wrote automated UI testing with compose UI testing framework.

Tufts University Human Interaction Lab

Medford, MA, USA

Lab Research Intern

Python, PyIntaller, Jamf Compose, Pytest

June 2022 - June 2023

- Worked as a core developer in a desktop application for conversation analysis.
- Led the development team from project inception to beta package release. Won \$15,000 project grant from SAGE Ocean Organization.
- Provided architect design to incoming lab interns on additional app features and improved app stability after beta release.

Tufts University Computer Science Department

Medford, MA, USA

Teaching Assistant

Standard ML, Scheme, Node.js, JavaScript

January 2022 - current

- Helped student groups complete web app projects for the web programming course.
- Lead weekly recitation to teach programming language concepts and functional programming.

Tufts University International Center

Medford, MA, USA

Web Design Assistant

HTML, CSS, JavaScript

June 2022 - December 2022

- Restructured and Implemented website for international center service.
- Collected and integrated user feedback during the staff meeting.

Projects

Virtual Machine and Universal Forward Translator

C, Standard ML

January 2023 - May 2022

- Implemented a multi-pass compiler for a scheme-like language and a virtual machine that accepts the compiled machine code.
- Completed core language features including high order function, closure conversion, automatic currying, and exception handling.

GailBot

Python, PyQt, Jamf Composer, PyInstaller, Pytest

September 2022 - September 2023

- Designed and built an audio analysis pipeline with configurable speech-to-text engine settings and plugins.
- Created a desktop interface and released the app package to around 15 conversation analysts for beta testing.

N-Queen Solver

Kotlin, Compose Multi-platform, Gradle

September 2023

- Built a desktop teaching tool to present the algorithmic steps of solving the N-Queens problem.
- Helped students understand the use of continuation passing style in backtracking problems with visual animation.

Convex Hull Simulator

p5.js, Typescript, React.js

January 2023

- Created an interactive simulator to display the steps of solving the Convex Hull problem with four different algorithms.

Dream

React Native, Node.js, TypeScript, MongoDB

June 2022 - August 2022

- Participated in a team project to develop a Mobile App used for dream recording.
- Implemented a user account system and a dream recording calendar.

Skills

Programming

Kotlin, C/C++, Java, Python, JavaScript, Typescript, Standard ML, Ocaml, Shell Script, CSS, HTML

Framework and Technologies

Jetpack Compose, React Js/React Native, Node.js, Express, Flask, PyQt, MongoDB, Git

Software and Platform

Figma, Confluence, Jira, Photoshop, Final Cut Pro