Haosheng (Vincent) Liang

• 503-475-6981 • liangmask@gmail.com • Portland, Oregon

OBJECTIVE

Diligent and detail-oriented software engineer with a strong aptitude for fast learning. Seeking a full-time Software Engineer position.

EDUCATION

Portland State University, Portland, Oregon	**GPA 4.0/4.0**	06/2023 - 06/2025

Master of Science: Computer Science, Cyber Security Graduate Certificate

Portland State University, Portland, Oregon		01/2021 - 06/2023

Bachelor of Science: Computer Science   **GPA 3.91/4.00**

PROJECTS

LeetViking   07/2024 - Present
- Took ownership of developing and launching a **full-stack** online coding judge platform, revolutionizing the way students practice for midterm and final coding exams
- Designed a React-based frontend and Java backend, implementing an automated pipeline to populate coding questions into the database and seamlessly integrate examples and images on a single page.
- **Dockerized** the application for high availability and scalability, incorporating **CI/CD** pipelines with **Jenkins** for automated deployment.

AI Retrieval-Augmented Generation System   03/2024 - Present
- Designed and implemented an AI-driven Retrieval-Augmented Generation (RAG) system to enhance data retrieval and contextual content generation.
- Leveraged LangChain, Google Generative AI, and Chroma Vectorstore for semantic indexing and efficient data retrieval.

System for Anonymous Feedback   01/2023 - 06/2023
- Led the development and deployment of backend and API services for a confidential feedback web application as part of a capstone project.
- Built **RESTful API** using **Express**, **Node.js**, and **TypeScript,** integrated with **PostgreSQL**.
- Improved CI/CD pipelines using Jenkins, reducing operational costs by 30%.
- Improved unit test coverage from 40% to 90% , enhanced product quality and reliability.

C-Tran Buses data pipeline   04/2022 - 06/2023
- Collected and processed 350,000 GPS data points daily from buses, ensuring data accuracy and consistency.
- Developed a **Python** script for data collection and transmission to **Apache Kafka**, utilizing a Virtual Machine on the **Google Cloud platform** for improved efficiency

WORK EXPERIENCE

Portland State University, Portland, Oregon

Teaching Assistant   09/2023 - Present
- Assisted in course development and student support for **Systems Programming & Architecture** and **Internet, Web & Cloud** using **GCP, AWS, C**, **Assembly**, **Python**, and **C++**.

Computer Science Tutor / Tutor Coordinator   09/2021 - Present
- Taught 400 students in code debugging, resolving memory leaks, performance optimization, Unix commands, and programming (**Java, C++, C**, **Python**, **Assembly**).
- Coordinated tutoring schedules, **mentored** new tutors, and **managed** the tutoring team.

ACHIEVEMENTS AND CERTIFICATIONS

National Cyber League Competition   04/2024 - 04/2024
- Securing the **147th** place in the Individual Game Experienced Student Bracket and **50th** place in the Team Game Experienced Student Bracket
- Demonstrated advanced skills in **cybersecurity analysis** and **problem-solving** across various security challenges and simulations