

SERAPHINE GOH

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WORK EXPERIENCE

XP Power - Software Engineer

July 2023 – Present

Product Engineering – Automation & Test

- Set up a **PostgreSQL database** server to store and manage **over 3 million rows** of product validation and test data
- Developed a **Django API** for streamlined database interactions and automated tasks such as data syncing, maintenance monitoring, and backup management
- Containerized Django + PostgreSQL using **Docker**, deploying across **8 lab stations** for simultaneous data collection
- Built a **Flask + React** web application, enabling fault code translation with cross-platform accessibility on web and mobile
- Designed a modular workspace repository for equipment and system protocol drivers, simplifying test sequence creation to a universal **4-step Jupyter Notebook**
- Delivered **training sessions** and ongoing support to improve user onboarding and efficient usage of the workspace
- Developed dynamic **Python** scripts for calibration and testing, leveraging **YAML files** for customizable configurations

Western Digital - Senior Software Modeling Systems Design Engineer

July 2020 – July 2023

Flash Product Engineering – Enterprise SSD – System Architecture

- Optimized performance, power, and latency metrics in enterprise SSD products through **Python** software modeling and batch simulations on **AWS cloud compute (EC2) and storage (S3)**
- Processed and visualized metric data with data processing tools such as **Jupyter, pandas, seaborn, matplotlib, and NumPy** to communicate recommended firmware implementations to cross-functional teams
- Built features into model and conduct studies to identify SSD product enhancements, **reducing read/write latency by over 44%** and **boosting performance by 54% for random workloads and 12.5% for sequential workloads**
- Improved modeling fidelity and create internal tools to increase data processing efficiency
- Updated and maintained portfolio of cross-platform tools used to parse firmware telemetry data into **SQLite database**, output summary statistics, and generate interactive visualizations for data analysis
- Contributed to codebase with **CI/CD practices** using git, Jenkins, BitBucket, and Artifactory

PROJECTS

Osusume: A Recommendation Forum | React (JavaScript), Flask (Python), SQLite

- Full-stack web application where users can poll the community and discuss recommendations for various subjects, such as movies, restaurants, and career advice
- Implements features such as authentication, commenting, voting, category tagging, and pagination
- Repo: <https://github.com/sgoh25/osusume>

EDUCATION

University of California, Los Angeles

M.S in Electrical and Computer Engineering (GPA: 3.6/4.0)

Sept 2018 – June 2020

B.S in Electrical Engineering; Honors: *cum laude* (GPA: 3.7/4.0)

Sept 2014 – June 2018

SKILLS

Programming Languages: Python, JavaScript, SQL, Ruby, C/C++, Java, bash

Technologies: Django, Flask, React, PostgreSQL, HTML, CSS, Jupyter Notebook, pandas, seaborn, matplotlib, NumPy

Development Tools: Git, Azure DevOps (Scrum Tools/Repos), VS Code, Docker, GitHub, AWS (S3/EC2)

Other: full-stack web development, scripting, data analysis/visualization, data science, debugging