

Nicholas Fang

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Languages

Java, Python, C, C++, Javascript, Typescript, Swift, SQL, Bash, HTML, CSS

Technologies

Node.js, Next.js, React, Docker, FastAPI, Flask, Spring, Redis, MongoDB, Neo4j

Experience

KeyByte | Research Intern

West Lafayette, IN May 2023 - May 2024

- Refined a **Python-based** genetic algorithm framework to allow for integration of **2+** new databases into the codebase and to decrease algorithm runtime by **20%**. Recognized as the subject matter expert in this domain
- Executed performance benchmarking of **Redis** and **Aerospike** databases on AWS EC2 instances using **Docker**, Yahoo! Cloud Serving Benchmark, and a bash script to compare their metrics and capabilities
- Designed and implemented comprehensive test suites using **Pytest** to ensure the reliability and performance of the genetic algorithm framework

Intel | Post-Silicon Validation Intern

Chandler, AZ May 2022 - August 2022

- Led the development of a new observability service created with **Bokeh** and **Python** to interactively visualize the memory performance of chips under various stressing conditions, automating performance analysis through visualizing complex CSV data and reducing engineering time spent on analysis to under **1 minute**
- Created a **CLI tool** using **Python** to improve the user experience of writing complex queries by decomposing query strings with lists into a database-friendly query language

Breezing | Web Development Intern

Tempe, AZ June 2021 - July 2021

- Optimized the company's WordPress site for **search engine optimization** (SEO) and user experience, resulting in improved rankings on Google's front page for **two additional keywords**
- Utilized plugins and domain analysis to enhance the website's speed and performance, achieving a Google Pagespeed Insights score that is **25-35% higher** than competitors' scores
- Designed and implemented autoplaying videos and other UI elements using **HTML** to provide a natural first-time user experience and a seamless transition into web content

Projects

BoilerDrive

August 2023 - December 2023

- Developed a cloud-based text file storage web application using **OpenAI API** for querying document contents with contextual answers, featuring a **Next.js** frontend, a **Python FastAPI** backend, and a **Microsoft Azure** database with blob storage

PurdueCircle

January 2022 - May 2022

- Contributed in the design of a university exclusive social networking application enabling the exchange of student-generated content utilizing a **React Native** frontend, **Java Spring** backend, and **MySQL** database

Education

Purdue University | West Lafayette, IN

August 2020 - May 2024

B.S. Computer Science, Minor in Economics

GPA: 3.71, Dean's List 2020 - 2024

Relevant Coursework: Intro to AI, Networks, iOS, Operating Systems, Data Structures & Algorithms, OOP

Interests

Restoring and upgrading old hardware, building mechanical keyboards, reading, bouldering