Shaquille Pearson

Email   LinkedIn   Portfolio

SUMMARY

Software Engineer with **3 years** of experience in **full-stack** development and building scalable, **data-driven** applications. Proficient in **Python**, **TypeScript**, and crafting intuitive **frontend** interfaces, optimizing **backend** performance, and streamlining **CI/CD** workflows.

EDUCATION

- **University of Waterloo**   Waterloo, ON
  *Master of Mathematics in Computer Science (**GPA 3.30/4.00**)*   *Jan. 2023 – Dec. 2024*

- **St.Georges University**   St.George's, Grenada
  *Bachelor of Science in Information Technology (**GPA 3.60/4.00**)*   *Jan. 2018 – Dec. 2021*

EXPERIENCE

The Software REBELs (Ranked 9th Globally in SE Research)   Waterloo, ON
Graduate Research Assistant   *Jan 2023 – Dec 2024*
- **Data Pipelines**: Engineered a **Python** data pipeline using **GitHub GraphQL** to efficiently process **1.27M** open-source projects, acquiring key build configuration and dependency data for robust downstream analytical applications within **PostgreSQL**.

- **Reproducible Environments**: Established **982** reproducible build environments for **NPM** projects using **Docker**, **Python** scripting, and **GitHub Actions**. This facilitated consistent and controlled data analysis workflows.

- **API Development**: Developed a **FastAPI** (**Python**) **REST API** with Docker to enable programmatic access to the reproducible build environment, automating dependency resolution and build validation for efficient data extraction.

Department of Public Information   Georgetown, Guyana
Junior Software Developer   *Jan 2022 - Dec 2022*
- **Content Automation**: Designed and implemented an automation system using **Node.js** and the **Axios** library to interact with the DPI website's **REST** CMS API, enabling automatic, scheduled updates for news articles, press releases, etc, which reduced manual effort by an estimated **30%**.

- **Frontend Performance Optimizations**: Optimized website performance by implementing **static site generation**, integrating **lazy loading** for non-critical assets, and **caching**, resulting in a **7%** reduction in page load times and enhanced user experience.

- **Backend Performance Optimization**: Refactored **MySQL** database schemas to reduce data redundancy and improve query efficiency. Implemented **B-Tree** indexing on high-traffic tables, which optimized backend performance and reduced average query response times **13%**.

Caribbean Coding Academy   St.George, Grenada
Frontend Engineer Intern   *May 2020 - August 2020 / May 2021 - August 2021*
- **Interactive Web Features**: Implemented dynamic user interfaces for key client dashboards using **React.js**, integrating **RESTful APIs** to enable real-time data updates (achieving less than **500ms** latency).

- **Bug Identification & Resolution**: Identified, documented, and resolved over **30** frontend issues using **Chrome DevTools** and **GitHub Issues**. Implemented targeted fixes in **HTML5** and responsive styling with **Tailwind CSS**.

- **Quality Assurance & Testing**: Developed robust testing strategies for a suite of React applications, writing over **200** unit and integration tests with **Jest** and **React** Testing Library, and end-to-end testing with **Cypress**.

PROGRAMMING SKILLS

- **Languages & Tools**: Python, TypeScript, C++, SQL, Cypher, Git, Docker, GitHub (REST, GraphQL, Actions)

- **Frameworks & Libraries**: Next.js, React Native, PyTorch, Jest, Django, Hugging Face

- **Databases**: PostgreSQL, MySQL, Firebase, Neo4j, MongoDB