Shaquille Pearson

Email   LinkedIn   Portfolio

SUMMARY

Recent graduate with **3 years** of experience in software engineering, specializing in scalable **data pipelines**, **reproducible CI/CD workflows**, and **API development**. Proficient in **Python and Javascript**, **FastAPI**, and **Docker**. Strong background in networking, database optimization, and performance tuning across academic and industry projects.

EDUCATION

- **University of Waterloo** — Waterloo, ON
  *Master of Mathematics in Computer Science (**GPA 86.57/100.00**)* — *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 Worldwide)** — Waterloo, ON
  Graduate Research Assistant — *Jan 2023 - Dec 2024*
    - **Data Pipeline**: Designed and built a data filtration pipeline with **Python** and **GitHub APIs** that processed over **1.27 million open-source** projects.
    - **Build Reproduction**: Led efforts to create reproducible build environments for **982 builds** in the **NPM** ecosystem using **Docker**, **Python**, **GitHub Actions** and **YML** files.
    - **API Development**: Built a REST API using **FastAPI**, **Python**, and **Docker** to interface with the reproducible build environment, Automating dependency resolution and build validation for NPM projects.

- **University of Waterloo** — Waterloo, ON
  Instructional Apprentice / Teaching Assistant — *Jan. 2023 – Dec. 2024*
    - **CS 116 (Introduction to Python Programming) & CS 135 (Functional Programming with Racket)**: Taught core programming concepts, recursion, and algorithmic analysis through tutorials and student support.
    - **SE 212 (Logic and Computation) & CS 251 (Computer Organization and Design)**: Provided guidance on formal logic, proof systems, digital circuits, and processor design through labs and office hours.
    - **CS 246 (Object-Oriented Programming in C++)**: Reinforced object-oriented programming, memory management, and debugging practices via tutorials and code reviews.

- **Department of Public Information** — Georgetown, Guyana
  Junior Software Developer — *January 2022 - December 2022*
    - **Content Automation**: Developed an automation system using **Node.js** and the **Axios** library to interact with the DPI website's **REST** CMS API, enabling automatic updates for news articles and press releases etc.
    - **Frontend Enhancements & UI Optimization**: Improved website performance and responsiveness by refactoring **React.js** components and optimizing **CSS** animations, enhancing page load speed and accessibility.
    - **Backend Performance Optimization**: Refactored **MySQL** database schemas to reduce redundancy and improve query efficiency, implementing **B-Tree** indexing on high-traffic tables, which optimized backend performance and reduced query response times by **13%**.

PROGRAMMING SKILLS

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

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

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