Shaquille Pearson

Email — Linkedin — Portfolio

EDUCATION

University of Waterloo — Waterloo, ON
Master of Mathematics in Computer Science — *Jan. 2023 – Dec. 2024*

St.Georges University — St.George's, Grenada
Bachelor of Science in Information Technology — *Jan. 2018 – Dec. 2021*

EXPERIENCE

The Software REBELs — Waterloo, ON
Graduate Research Assistant — *Jan 2023 - Present*

- **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.
- **Algorithm Optimization**: Identified and categorized **156** new ghost commit patterns within the **Debian** ecosystem. Designed mitigation strategies to improve the **SSZ** algorithm's accuracy by **14%**.

University of Waterloo — Waterloo, ON
Instructional Apprentice / Teaching Assistant in CS — *Jan 2023 - Present*

- **Technical Assistance**: Assisted over **30+** students with coding assignments, particularly **debugging Python code** and resolving errors.
- **Communication and Collaboration**: Communicated effectively with students and instructors via email, forums, and in-person meetings, addressing inquiries and providing timely feedback.
- **Teamwork and Leadership**: Collaborated closely with course instructors and fellow instructional apprentices to lead tutorials, proctor exams, and coordinate grading.

Department of Public Information — Georgetown, Guyana
Junior ICT Officer — *Aug 2022 - January 2023*

- **Script Automation**: Developed and implemented automation scripts using **Python** and **JavaScript**, reducing manual website testing and content updates by **23%** with **WordPress** and **Lighthouse**
- **Networking Troublshooting**: Diagnosed and resolved **50+** connectivity issues using **Wireshark**, which reduced local network downtime by **8%** and improved overall **network** reliability.
- **End-User Support**: Provided technical support to **100+** staff members for **software** and **hardware** issues on first contact. Utilized help desk ticketing systems and remote assistance tools to deliver timely solutions.

COURSES & PROJECTS

- **Software Analytics for Release Pipelines**: **Project** - Exploring Dependency Related Breakages In The NPM Ecosystem
- **Introduction To Machine Learning**: **Project** - Predicting Build Breakage With Machine Learning
- **Consensus Protocols & Blockchains**: **Project** - Code Review Practises On Ethereum Smart Contracts
- **Data Sources for Emerging Technologies**: **Project** - Exploring The Prevalence of Social Biases In State Of The Art Large Language Models
- **Software Engineering For Big Data & AI**: - In progress
- **Designing Value-Driven Tech**: - In progress
- **Beyond Relational DBMSs**: - In progress

PROGRAMMING SKILLS

- **Languages**: Python, JavaScript, TypeScript, C++, SQL, Cypher, Latex

- **Technologies**: Docker, Git, GitHub [REST, GraphQL, Actions], Pandas, NodeJS

- **Frameworks**: React, React Native, jQuery, ExpressJS, PyTorch, Django

- **Databases**: MySQL, KuzuDB, Firebase, Firestore, MongoDB, Microsoft Access