

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 (Ranked 9th Worldwide)** 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*
 - **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.
 - **Network Traffic Monitoring:** Used **Wireshark** and **Python** to monitor and identify traffic bottlenecks caused by IP conflicts on DHCP-assigned devices by **9%**
 - **Database Optimization:** Conducted a full audit of **MySQL** DBMS to minimize redundant data and implemented **B-Tree** indexing on frequently queried columns which reduced query response times by **13%**

COURSES & PROJECTS

- **Software Analytics for Release Pipelines: Project -** Exploring The Prevalence of Social Biases In State Of The Art Large Language Models (LLMs)
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 -** An Evaluation of Automated Code Review Practices
- **Beyond Relational DBMSs: (In progress)** A Graph-Based Approach to Dependency Management in NPM

PROGRAMMING SKILLS

- **Languages:** Python, JavaScript, TypeScript, C++, SQL, Cypher
- **Tools:** Docker, Git, GitHub [REST, GraphQL, Actions], Hugging Face
- **Frameworks:** React, React Native, ExpressJS, PyTorch, Django
- **Databases:** MySQL, KuzuDB, Firebase, Neo4J, MongoDB