

# Shaquille Pearson

Email — LinkedIn — Portfolio

## EDUCATION

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- **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

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- **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.
  - **Networking Troubleshooting:** 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

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- **Software Analytics for Release Pipelines: Project** - Exploring Dependency Related Breakages In The NPM Ecosystem
- **Software Engineering For Big Data & AI: (In progress)** Semantic Accuracy and Efficiency Evaluation Framework for Automated Code Review Comments
- **Introduction To Machine Learning: Project** - Predicting Build Breakage With Machine Learning
- **Beyond Relational DBMSs: (In progress)** A Graph-Based Approach to Dependency Management in NPM
- **Consensus Protocols & Blockchains: Project** - Code Review Practises On Ethereum Smart Contracts
- **Designing Value-Driven Tech: (In progress)** Sin Tracker - A Framework for Situational Recommendations in the Judicial System
- **Data Sources for Emerging Technologies: Project** - Exploring The Prevalence of Social Biases In State Of The Art Large Language Models (LLMs)

## PROGRAMMING SKILLS

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