

# Shaquille Pearson

Email — LinkedIn — Portfolio

## SUMMARY

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Recent graduate with **2+ years** of software engineering experience **across academic and industry roles**. Proficient in building **large-scale data pipelines**, **reproducible CI/CD workflows**, and **performance optimized algorithms**, with experience in **APIs**, **networking**, and **database optimization**.

## EDUCATION

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- **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

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- **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.
  - **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* Jan. 2023 – Dec. 2024
  - **CS 116 – Introduction to Python Programming:** Guided students through core Python concepts—including data types, functions, recursion, and iteration—while introducing fundamental algorithmic analysis.
  - **CS 135 – Functional Programming with Racket:** Led weekly tutorials in functional programming, simplifying recursion, higher-order functions, and functional design principles.
  - **SE 212 – Logic and Computation:** Provided support in formal logic, proof systems, and models of computation. Offered one-on-one help for correctness proofs and logic-based specifications, fostering critical thinking and structured problem-solving.
  - **CS 246 – Object-Oriented Programming in C++:** Helped reinforce object-oriented programming principles, design patterns, and memory management. Created debugging exercises and performed code reviews to reinforce best practices and enhance software design skills.
  - **CS 251 – Computer Organization and Design:** Conducted practical labs on digital logic and basic processor design, guiding students through building combinational and sequential circuits.
- **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%**

## PROGRAMMING SKILLS

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- **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