Zaid Okal

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Education

Western University | BESc - Software Engineering *September 2020 - April 2025*
Dean's Honor List | Western Scholarship of Distinction
Coursework — Database Systems, Software Design, Algorithms, Networking, Software Construction, Data Structures

Experience

Software Developer in Test Intern — J.D Power, Remote *May 2023 - August 2024*
– Engineered **Java-based** automation utilities with **Serenity BDD** and **RESTful APIs**, improving repetitive task efficiency by **42%** through automated build triggers, parallelized test execution, and dynamic reporting across distributed environments
– Led the migration from **Serenity** to **Playwright**, leveraging **TypeScript**, **Node.js**, and **Playwright Runner** to achieve a **70%** reduction in pipleine execution time via multi-threaded execution, and optimized distributed load balancing
– Architected containerized testing frameworks using **Kubernetes** and enhanced **GitLab CI/CD pipelines**, increasing test coverage by **22%** through **Dockerized** suites and parameterized tests, with real-time monitoring and analytics using **Grafana**
– Developed integration test suites using **Gradle**, **JUnit**, and **Allure**, automating regression testing workflows and integrating with **GitLab CI/CD pipelines**, improving deployment automation efficiency by **35%** and optimizing test orchestration
– Accelerated project delivery by **30%** through effective cross-functional **collaboration** and **agile** methodologies, addressing key bottlenecks and improving team workflows, while streamlining processes and ensuring quality standards were met
– Received the **Power Award**, **Innovation Award**, and was recognized as a **Star Intern** out of 50 interns

Data Analyst Intern — Co-Operators, London, Ontario, Canada *May 2022 - August 2022*
– Diagnosed and resolved complex client database issues by deploying advanced troubleshooting protocols, data integrity checks, and performance optimization techniques, driving a **15%** increase in client satisfaction, retention, and long-term loyalty
– Designed and executed strategic organizational initiatives to optimize the online registration process, achieving a **26%** surge in client registrations and significantly enhancing overall business productivity and operational efficiency

Projects

RBC — GenAI-powered Sustainable Finance — Python, React.js, MongoDB
– Developed a **GenAI** system for **RBC** to automate assessing compliance with the **RBC Sustainable Finance Framework**.
– Leveraged **LLaMA 3.2** to analyze detailed public reports, AGMs, stakeholder communications, and news sources, significantly reducing manual effort while enhancing the accuracy and overall integrity of sustainable finance evaluations
– Designed the frontend using **React.js**, **Next.js**, and **Tailwind CSS**, ensuring a responsive and user-friendly interface
– Built the backend with **Python** and **FastAPI**, enabling highly efficient data processing and secure API endpoints
– Utilized **MongoDB** and **PyMongo** for robust database management, ensuring optimized data storage and quick retrieval

CourseFlow — Node.js, React.js, Express.js, MongoDB & Google Cloud Platform
– Architected a **MERN stack** platform for university instructors, enabling dynamic **CRUD operations**, real-time updates, and version control of course outlines, streamlining instructional workflows and enhancing system scalability
– Implemented advanced caching strategies and optimized database queries, improving data retrieval times by **45%** and ensuring high availability and fault tolerance, while leveraging **GCP** for scalable cloud infrastructure and automated deployment

Music Enthusiast @ Hack Western 9 — JavaScript, Node.js & React
– Engineered a **RESTful API** using **Node.js** and **Express** for music data retrieval, integrated with a responsive **React** frontend. Implemented **HTTP** caching headers, in-memory caching mechanisms, and efficient state management techniques to reduce API latency by 60%, minimize server load, and enhance system scalability, performance, and fault tolerance

Projection — C# & Unity
– Built an open-world RPG in **Unity**, with AI-driven boss battles utilizing behavior trees and finite state machines, procedurally generated terrains for expansive exploration, and a dynamic mission tracking system using event-driven programming

Skills

Programming Languages	Python, Java, JavaScript, C#, TypeScript, HTML/CSS, SQL, Swift, XML, GO, Ruby
Frameworks & Technologies	ReactJS, NodeJS, NextJS, Express.js, MySQL, Git, AWS, Unity, MongoDB, GCP, PyMongo