Youssuf Helaly

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EDUCATION

University of Ottawa (uOttawa)   **Ottawa, ON**
Bachelor of Applied Science in Software Engineering | 3.9/4.0 GPA   *Expected Graduation: Apr 2027*
- **Relevant Coursework:** Data Structures and Algorithms, Intro. to Software Engineering, Operating Systems, Computer Architecture, Software Quality Assurance, Professional Communication and Responsibility

WORK EXPERIENCE

Nokia   **Kanata, ON**
Full-Stack Engineering Intern   *Jan 2025 - Apr 2025*
- Engineered a high-performance **Java Spring** back-end, reducing bugs and **Tomcat** log errors by 20%.
- Optimized **Elasticsearch** queries, streamlining logic to enhance system responsiveness.
- Enhanced **React**/**Redux** frontend, fixing API issues and reducing load times by 40%, improving user experience.
- Used **Docker** for containerization, **Kubernetes** for orchestration, and **Jenkins** for build automation in a **Linux** environment, streamlining development workflows.
- Developed **JUnit** and **Cypress** tests, increasing code coverage by 15% and boosting system reliability.
- Collaborated in an **Agile Scrum** team, participating in sprint planning and stand-ups for effective communication.
- Created **PostgreSQL** migration scripts, ensuring 100% data integrity and reducing transition time during updates.

Solink   **Kanata, ON**
Software Engineering Intern   *May 2024 - Aug 2024*
- Designed and implemented 50+ test cases and 5,000+ lines of code using **Pytest** and **Robot**, establishing a new automation framework that improved release quality and reduced manual testing by 30%.
- Built and maintained a scalable **RESTful API** in **Python**, managing 20+ endpoints with **YAML**-based configuration to ensure maintainability and scalability.
- Integrated **Playwright** and **Selenium** for UI testing, increasing test reliability and reducing user-facing bugs.
- Automated test execution workflows, saving the company $2,000+ monthly by reducing reliance on manual testing, while accelerating release cycles and improving test coverage.
- Debugged flaky tests and **CI** pipeline issues, improving reliability and reducing false positives during regression.

PROJECTS

Image Analysis Web Application | *Source Code*   *ReactJS | Flask | AWS | SQL*
- Developed a scalable web app for image analysis using **React** and **Flask**, leveraging **AWS Rekognition** for image processing and **S3** for storage, improving search efficiency by 40%.
- Managed image uploads, user authentication, and filtering, processing 500+ images in seconds and delivering high-impact solutions under tight deadlines.
- Optimized database queries in **SQLite**, reducing redundant processing and ensuring availability and performance.

Slice Storm | *Source Code*   *Python | Pygame*
- Developed a 2D slicing game inspired by Fruit Ninja using **Python** and **Pygame**, featuring slicing mechanics, bomb avoidance, and a dynamic difficulty system.
- Implemented a pause feature and intuitive menu system for smooth navigation and better gameplay experience.
- Applied **OOP** to manage game state, UI, and input, optimizing performance and code maintainability.

SKILLS

Languages: JavaScript, Python, SQL, Java, TypeScript, C, HTML, CSS
Libraries/Frameworks: Spring Boot, React, Flask, Redux, TensorFlow, PyTorch, NumPy, matplotlib
Tools: Git, Docker, Kubernetes, AWS, Jenkins, Jira, JUnit, Linux (Red Hat), ElasticSearch, PostgreSQL

LEADERSHIP EXPERIENCE

Volunteering – Led volunteer teams, collaborating with staff and partners to support the homeless.   *Jan 2025*
Sports – Gold medalist and regional champion in soccer as captain, showcasing leadership and determination.   *May 2024*
Conferences – Participated in leadership and professional growth conferences, enhancing skills for future success   *Nov 2023*