Yuvraj Sehgal

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EDUCATION

Honours Bachelor of Science, Computer Science   January 2021 – Present
Brock University, St. Catharines, ON

- Expected Graduation: January 2025
- GPA: 3.9/4.0

TECHNICAL SKILLS

Programming Languages: Java, Python, C++, C
Web Development: Java Spring, Java Spring boot, ReactJS, Angular, JSP, Java Servlets, HTML/CSS, JavaScript, Rest APIs, TypeScript
Database Management: MySQL, OracleDB, PostgreSQL, MongoDB
Build Tools: Maven, Gradle, Docker
Testing and Automation Tools: Selenium, Appium, Gherkins, Cucumber, Web Driver, JUnit, Karma
Other: Git, Github, JIRA, Confluence, Bitbucket, Bash, Word, Outlook, Excel, PowerPoint, SDLC

EXPERIENCE

Full Stack Developer   July 2024 – Present
Mengalo   *Toronto, ON*

- Developed a full-stack chatbot using Spring Boot, LangChain, OpenAI, and React to provide real-time analytical insights, boosting product value and increasing customer acquisition.
- Integrated Power BI dashboard with React libraries, enhancing user experience and improving analytics visualization.
- Resolved six security vulnerabilities, protecting sensitive company and customer data and mitigating potential threats.
- Implemented code reviews, secure coding, Git management, and agile practices, boosting productivity and enhancing code quality in the startup.

Research Assistant   January 2024 – Present
Brock University   *St. Catharines, ON*

- Conducted empirical research with Professor Naser Ezzati-Jivan to evaluate the efficiency of generative AI in creating GitHub README files.
- Developed an automated README generator for GitHub repositories using Java Spring Boot, LangChain, and OpenAI models.
- Awarded the Match of Minds Scholarship for outstanding academic performance and research potential, selected as the sole recipient in the department based on faculty recommendations.
- Evaluated model performance on accuracy, completeness, and readability, offering insights into its effectiveness in automating project documentation.

Automation Engineer Coop   May 2024 – August 2024
Scotiabank   *Toronto, ON*

- Acquired Android automation skills and implemented automation for 20 test case scenarios using Java, Selenium, and Appium, reducing testing time by over 75% within four months.
- Collaborated with the business quality assurance team to design test case scenarios that aligned with requirements and ensured business needs were met.
- Created comprehensive reports for automation results, collaborating with the business quality assurance team to ensure tests met requirements and aligned with BQA standards.
- Volunteered for tree planting in Toronto's Sun Valley.

Full Stack Developer Coop   May 2023 – August 2023

Scotiabank   *Toronto, ON*

- Integrated SSL encryption in front-end and back-end code for the bank's Trade Floor Limit Management System (LMS), enhancing web application security.
- Developed comprehensive unit test cases using Java JUnit and Karma for the LMS website, increasing test coverage by 15% and ensuring compliance with the bank's 85% minimum coverage mandate.
- Resolved cross-functional issues by collaborating with another department, enhancing efficiency and expanding the functionality of a Python script used for trade floor risk management.
- Identified a gap and created an extensive Confluence page to provide initial setup guidance, expediting onboarding for new team members and streamlining their integration process.
- Volunteered for tree planting in Toronto's Don Valley during Community Day.

Automation Engineer Coop   September 2022 – December 2022

Scotiabank   *Toronto, ON*

- Mastered automation techniques for quality assurance, crafting and implementing over 35 test scenarios within four month.
- Performed regression testing using BDD frameworks like Cucumber in Java, seamlessly integrating with the bank's automation framework for comprehensive and efficient testing.
- Automated the creation of multiple JIRA tickets using Python scripts and Excel, achieving a 70% reduction in task completion time and significantly enhancing team productivity.
- Volunteered to pack over 300 health kits for the homeless during Community Day.

PROJECTS

Stock Market Prediction Using Genetic Programming   April 2024

Brock University

- Developed a regression algorithm using genetic programming to predict NASDAQ and S&P 500 prices, achieving up to 70% accuracy.
- Conducted a comparative analysis of various stocks, researching procedures and algorithms, and synthesized findings into a comprehensive report.
- Learned the ECJ library and integrated it into the project, enhancing research capabilities with evolutionary computation techniques.

AI Powered Web-Summarizer COSC-4P02 Software Engineering Project   April 2023

Brock University

- Designed and implemented a full-stack Web-Summarizer tool using Java Spring Boot, Thymeleaf, and OpenAI to summarize web pages based on links or text, resulting in a robust solution for concise content summaries and sharing options.
- Served as Scrum Master and Developer, facilitating agile ceremonies and coordinating team efforts, resulting in timely project delivery and enhanced team productivity.
- Developed a comprehensive test plan covering all scenarios and conducted extensive regression testing, ensuring a high-quality product release with minimal defects.
- Implemented OAuth2 in the application, significantly enhancing security measures and protecting customer data.

Village War Advanced OOPs Project   April 2023

Brock University

- Designed a UML diagram for a complex game, utilizing object-oriented programming principles to create an efficient and comprehensive design.
- Developed game logic, rules, and user interaction mechanisms by integrating advanced Java OOP features, resulting in a top-tier implementation within the class.
- Incorporated the MVC design pattern in game development, enabling a graphical user interface and enhancing the game experience while improving scalability and maintainability.
- Revamped the project to utilize a multi-threaded client-server model with UDP protocol for packet sharing, resulting in notable enhancements in game performance.

Awards & Scholarships

Match of Minds Scholarship September 2024

Brock University

- Awarded a research scholarship based on faculty recommendations, selected as the sole recipient within the department.

Dean's Honour List for Academic Year 3 September 2024

Brock University

- Awarded to students maintaining an average above 80%.

Golden Key Award January 2023

Brock University

- Recognized among the top 15% of students in the faculty.

Dean's Honour List for Academic Year 2 January 2023

Brock University

- Awarded to students maintaining an average above 80%.

Dean's Honour List for Academic Year 1 January 2022

Brock University

- Awarded to students maintaining an average above 80%.

Brock Entrance Scholarship January 2021

Brock University

- Awarded to students with strong academic performance in senior secondary education.