Yuvraj Sehgal

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Portfolio | github.com/17YuvrajSehgal | linkedin.com/in/yuvraj-sehgal

SUMMARY OF SKILLS

- **Programming Languages**: Java, Python, JavaScript
- **Web Development**: Spring Boot, FastAPI, ReactJS, Angular, HTML/CSS, Restful APIs
- **Database Management**: MySQL, Oracle DB, PostgreSQL, MongoDB, Neo4j
- **Testing and Automation Tools:** Selenium, Appium, Cucumber, Web Driver, JUnit, Karma
- **Others**: GraphQL, Maven, Gradle, Docker, Git, GitHub, JIRA, Confluence, Bitbucket, SDLC, LangChain

EDUCATION

Bachelor of Science (Honours), Computer Science (Intelligent Systems)　　　　　Jan 2021 - Jan 2025
Brock University, St Catharines, ON

- GPA: **87%** | **Dean's List: All Semesters**
- **Relevant Coursework**: Artificial Intelligence, Neural Networks, Genetic Programming, Data Structure and Algorithms, DBMS, Web Development, Calculus, Theory of Computation, Statistics, Data Science, Computer Networks, Software Testing and Debugging

WORK EXPERIENCE

AI Developer　　　　　Aug 2024 - Present
Mengalo, Toronto, ON

- **Designed** the **system architecture** and built a **full-stack AI** inbox for automated message generation powered with **agentic AI** using **Python's Fast API** and **React**.
- Leveraged **NLP** libraries for sentiment analysis of past emails, enabling agents to adapt its behavior based on user interactions.
- Designed a **LLM** and **RAG** powered **Chatbot** for real time **data analytics** with **Python**, **LangChain**, **React**, and **Neo4j**.
- Designed a database schema and an automated pipeline for cleaning and transforming data from a PostgreSQL on **AWS** to a **Neo4j** graph database on cloud.
- Implemented code reviews, **secure** coding practices, **git** management, and **agile** methodologies, promoting productivity and code quality in startup environment.
- Collaborated with software development teams, product managers, and client stakeholders to identify improvements and new features for existing products.

Research Assistant　　　　　Jan 2024 - Dec 2024
Brock University, St Catharines, ON

- Received prestigious **Match of Minds Scholarship** for exceptional academic performance and research potential, as sole recipient in the department.
- Created an **open-source dataset** of over 2,000 research artifacts, promoting collaboration and accessibility; projected to improve research efficiency by 30%, accelerating discovery and innovation.
- Conducted **empirical research** with Professor to evaluate capability of generative AI in evaluating software artifacts for 40 conferences.
- Designed an Artifact Documentation tool with advanced **OOPs in Python** and **OpenAI** and **Neo4j**, analyzing conference acceptance probabilities with AI, decreasing documentation time by 90%.

Automation Engineer Coop　　　　　Jan 2024 - Dec 2024
Scotiabank, Toronto, ON

- Learned Android automation and built automation for 20 test case scenarios using **Java**, **Selenium**, and **Appium**, reducing testing time by over **75%** within four months.
- Developed a **Java** package with advanced **OOPs** concepts to manage boilerplate code for **Android automation**, maximizing reusability and saving time for future testing efforts.
- Collaborated with the business quality assurance team to **design** test case scenarios aligning with business requirements.
- Integrated a reporting module leveraging **HTML/CSS** to generate comprehensive test reports for each test case, to cut down the validation time by 50%.

Full Stack Developer Coop   May 2023 - Aug 2023

Scotiabank, Toronto, ON

- Delivered a comprehensive test suite in **Java JUnit and Karma** for the LMS website, **increasing** test coverage by **15%** and ensuring compliance with the bank's **85%** minimum coverage mandate.
- **Collaborated** with another department to improvise an automation script written in **Python**; extended its functionality **reducing** manual file management time by **20%.**

Automation Engineer Coop   Sep 2022 - Dec 2022

Scotiabank, Toronto, ON

- Automated web testing regression test suites utilizing **Selenium and Cucumber BDD in Java**, integrating with the bank's automation framework and **reduced** testing time by **70%.**

<div align="center">ACADEMIC PROJECTS</div>

Stock Market Prediction – Neural Network   Dec 2024

Brock University, St Catharines, ON

- Utilized **Artificial Neural Network** to predict stock prices using **TensorFlow**.

News App - Android   Dec 2024

Brock University, St Catharines, ON

- Developed a feature-rich **android** news application utilizing News-API, enabling categorical news browsing, multilingual search, bookmarking with built-in database support, and user preferences storage via shared preferences.

AI Powered Web Summary Tool – Spring Boot   Apr 2024

Brock University, St Catharines, ON

- Created an **AI** tool utilizing **Java Spring Boot** and **OpenAI** to summarize web pages, serving as **Scrum Master** for a team of five and a back-end developer

Stock Market Prediction – Genetic Programming   Apr 2024

Brock University, St Catharines, ON

- Designed a **genetic programming** model in **Java** Operating on a regression algorithm and achieved over **80%** accuracy in predicting NASDAQ and S&P 500 stock prices.

Village War Game – Java   Apr 2023

Brock University, St Catharines, ON

- Engineered a multiplayer game with advanced **OOPs** principles, improvising performance through a **multi-threaded client-server** model leveraging **UDP**.

<div align="center">SCHOLARSHIPS AND AWARDS</div>

Match of Minds Scholarship   Sept 2024

- Awarded a research grant as the sole recipient in the department, based on faculty recommendations.

Golden Key Award   Jan 2023

- Inducted into the Golden Key International Honor Society for academic achievement, placed within the top 15% of university.