Aditya Rao

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Education

McMaster University — Hamilton, ON
Bachelor of Software Engineering, First Year, GPA: 4.0 — *Sept. 2023 – Present*

Bur Oak Secondary School — Markham, ON
Graduated with Honors, Final Average: 94% — *Sept. 2019 – June 2023*

Skills

Languages: Java, Python, SQL (MySQL, PostgreSQL), .NET Framework, C/C++, JavaScript/TypeScript
Frameworks: Spring Boot, Hibernate, React, Express, Next.js, Django, Flask, UWP, ASP.NET Core
Developer Tools: Eclipse, VS Code, Visual Studio, Git, Android Studio, Figma, Unity, MongoDB
Libraries: Bootstrap, JQuery, TailwindCSS, Google Cloud Platform, Pandas, TensorFlow, SciKit Learn
Hobbies: Sketching, Painting, Violin (Western and Carnatic), Competitive Badminton, Swimming
Non Technical Skills: Leadership, Goal Oriented, Proactive, Time Management, Team Player, Fast Learner, Critical and Analytical Thinker

Experience

Team InnovOak — Feb 2023 – Present
Founder — *Markham, ON*

- Founded and led InnovOak, a team of diverse undergraduates from top univeristies dedicated to developing impactful tools.
- Led development of a gamified fitness app, using Android and MySQL/Servlets targeted towards youth.
- Acted as Project Manager and Senior Developer, guiding the team in a professional, large-scale application development environment.
- Engineered a microservices-based architecture with REST for efficient data-driven operations.

Software Team Lead for FRC First Robotics Team — Jan 2023 – May 2023
Team Lead — *Bur Oak Secondary School, Markham, ON*

- Led my high school's robotics team as the software team lead at the FRC 2023 competition.
- Utilized WPLib to develop a fully functional robot capable of driving, picking up cones and cubes, and balancing on a moving platform using a gyroscope.
- Secured the Rookie All-Star Award and Rookie Inspiration Award at the FRC FIRST Robotics Competition 2023 at Newmarket and Western University.

Projects

QuakeGuard | *Next.js, React, Flask, Python, TensorFlow, Pandas, GCP* — Jan 2024 – Jan 2024

- Developed an earthquake prediction app for DeltaHacks X, using Next.js, Flask, and Machine Learning.
- Commenced model development with SciKit Learn, later transitioning to TensorFlow & Keras's Neural Network implementation, culminating in a 90% accuracy in predicting earthquakes with a magnitude of 5 and above
- Used Maps API for Geocoding to highlight high-risk areas and implemented Google Pay for donation management.
- Invited to GDSC McMaster's Solutions Challenge Hackathon for the enhancement and refinement of our product.

AutoCode Framework | *Core Java* — Jun 2023 – Present

- Creating a versatile framework to streamline the development of various projects.
- Developing specialized utilities for Systems Architecture, spanning from Web and AI to Game Development.
- Currently crafted an IoC container and a Mathematical Expressions and Evaluating Framework
- Advancing the framework by incorporating web server and integrating API support, with ongoing efforts to seamlessly mesh these capabilities with complementary tools.

Projects Continued

Task Management and Scheduling App | *Java, JavaFX, Google Classroom API* May 2023 – Jun 2023

- Developed an enterprise-grade calendar tailored for efficient task management and daily organization for both students and employees.
- Features include event creation, integration with Google Classroom events, sub-task management, reminder, and alert systems, and a Pomodoro system for task completion.

Big Data Visualization Tool | *Java, Swing, JFreeChart* Apr 2023 – May 2023

- Developed a tool that scrapes demographic data from Ontario's Open Data datasets and allows the client to visualize and model the data and trends within
- Features include data visualization, data filtering, data prediction and extrapolation, splash screen, and help screen, modeling data related to birth, death, employment, and marriage.

Sample E-commerce Web App | *Java, Spring, Hibernate, PostgreSQL, JQuery* Dec 2021 – Jan 2022

- Designed an e-commerce app template for local businesses, emphasizing systems and server-side development.
- Utilized Spring and Hibernate for the backend, incorporating Stripe for payments and Gmail API for automated email management.
- Implemented key features including user authentication, employee and product management, notifications, and various other functionalities.

SFML Game Engine | *C++, SFML, Visual Studio, Git* May 2021 – Aug 2021

- Developed a GameEngine in C++ using SFML, managed with Visual Studio and GitHub for version control.
- Converted and deployed a sharpshooter game from C# to C++, showcasing adaptability in language transition within the game development framework.

Endless Runner | *C#, Unity3D, Visual Studio* Dec 2020 –Apr 2021

- Developed a side-scrolling game using Unity3D and C# similar to Temple Run
- Explored key concepts within Game Design, Systems Architecture, and Object Oriented Programming using C#

Awards and Achievements

Faculty of Engineering Scholarship, McMaster University Jul 2023

Ontario Scholar Award from Bur Oak Secondary School Jun 2023

Honor Roll from Bur Oak Secondary School 2019 – 2023

Award of Distinction in Euclid Math Competition Apr 2023

Award of Distinction in Canadian Computing Competition Feb 2023

Award of Distinction in Canadian Senior Math Contest Nov 2023

Award of Merit for Grade 11 Computer Science from Bur Oak Secondary School Oct 2023

Graduated with Distinction from Spirit of Math, Markham Jun 2022