

Abhiroop Sikand

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EDUCATION

Bachelor of Engineering, *Specializing in Software Engineering – Big Data*

2022-2026

York University - Academic Excellence Scholarship (95%+)

- Courses: Data Structures & Algorithms, Advanced Object-Oriented Programming, Database Systems, Software Development, Embedded Systems, Operating Systems, Digital Logic Design, Probability & Statistics

PROJECTS

Restaurant Reviewer App:

- **Led a team** to design an end-to-end application using **Java**, projected to increase restaurant visibility by **45%**.
- Developed and implemented an optimized database architecture with **38% faster response times**
- Created effective user interface illustrating proficiency in front-end design and **SQL**.
- Built features for user interaction, review management, filters, food logs, and gamification elements.

Chrome Extension – Article Summarizer:

- Designed a software tool using JavaScript and HTML/CSS to summarize articles, reducing reading time by **60-70%**
- Integrated API to quickly extract key information from lengthy articles, enhancing efficiency and comprehension.

Weather App: abhiroop-sikand.github.io/Weather-App/

- Designed and built a user-friendly weather application using **JavaScript** and HTML/CSS, allowing users to access real-time weather forecasts with **90%** reliability.
- Showcase technical skills and understanding of **web development** by successfully creating and launching a functional platform.

Self-Watering Plant System:

- Developed an automated system built with **MATLAB** to measure soil moisture levels and hydrate plants when levels fall below a threshold, generally boosting plant health by **30%**.

Autonomous Vehicle:

- Created a robotic system using **C++** featuring path following and obstacle avoidance with **96% accuracy**.
- Programmed microcontroller and ultrasonic/IR sensors to optimize the embedded systems algorithms.

Space Invaders:

- Using expertise in **software/game development** to successfully build a Space Invaders-style game in Java with comprehensive user interface features and high-score functionality.

Pokémon Battle Simulator:

- Exhibited OOP skills in Java by designing and implementing a feature-rich animated game with an intuitive user interface and an efficient high-score tracking system.

TECHNICAL SKILLS

Programming Languages: Java, Python, C, C++, C#, HTML/CSS, MATLAB, JavaScript, SQL, RISC-V, Verilog, Event-B

Tools & Frameworks: AWS, Git, CMD, Maven, Arduino, Quartus, Rodin, Microsoft Suit, Google Workspace

LEADERSHIP EXPERIENCE

Lassonde Engineering Society: Academic Committee

June 2023 - Present

- Member of the Academic Committee responsible for addressing issues across various faculties while identifying and discussing academic concerns within the university.
- Collaborating with committee members to plan and host diverse initiatives resulting in fostering academic engagement and problem-solving skills.

SARIT – Micro mobility by YorkU: Representative

January-March 2024

- Develop a comprehensive understanding of features and research being conducted on the vehicle, to communicate the technical aspects of the SARIT and the significance of the research being conducted.