

# 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

## WORK EXPERIENCE

### Java Coding Tutor:

September 2024 - Present

- Mentored students in Java programming, covering fundamental concepts, **OOP principles**, and **data structures**.
- Provided personalized guidance and **debugging** assistance, improving coding proficiency and problem-solving.
- Assisted students with exam preparation and assignments, leading to improved academic performance and confidence in coding.

## 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 **SQL** database architecture with **38% faster response times**.
- Created effective user interface illustrating proficiency in front-end design.
- 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/](https://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 animated game with an intuitive UI and score tracking.

## TECHNICAL SKILLS

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

**Tools & Frameworks:** Git, React, Spring Boot, CMD, Maven, Arduino, Quartus, Rodin, Microsoft Suit, Google Workspace

## LEADERSHIP EXPERIENCE

### Charity - Crafting for A Cure: Vice President

September 2023 - Present

- Organized hospital and event planning efforts for charitable initiatives, ensuring impactful outcomes.

### Lassonde Engineering Society: Academic Committee

June 2023 - Present

- Responsible for addressing issues across faculties while identifying and discussing concerns within the university.