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.

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** launching a functional platform.

Yorku Parking System:

- Built a parking management system in Java with a JavaFX UI, managing **500+ simulated parking spots**.
- Implemented key features such as real-time availability, and booking, improving system usability by **70%**.
- Developed user and role management (students, faculty, managers etc.) with auto-generated admin accounts, parking validation, rate differentiation, and sensor-based spot tracking.

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.

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.