

# ABHAY WALIA

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## Education

### University of Toronto

Sep. 2020 – Present

*Bachelor of Applied Science in Computer Engineering*

*Toronto, ON*

**Minor:** Artificial Intelligence (AI)

**Relevant Courses:** Algorithms & Data Structures, Operating Systems, Software Design & Communication, Software Engineering, Programming Fundamentals, Computer Organization, Digital Systems, Applied Fundamentals of Deep Learning

**Activities:** Blue Sky Solar Racing (Operations team)

## Experience

### Scient Solutions

Sep. 2022 – Sep. 2023

*Junior Front End Dev*

*Mississauga, ON*

- Collaborated closely with a compact and highly effective team to develop a cutting-edge iOS and Android application using the versatile React Native framework, contributing to its successful deployment.
- Played a pivotal role in the design and development of the frontend for a logistics and delivery application, incorporating complex features such as embedded maps, signature capture, and a user rating system, which greatly enhanced the user experience and functionality.
- Expertly managed the seamless flow of data between the frontend and backend server, optimizing data transfer processes to enhance application efficiency and performance.
- Continued to maintain and provide support for the app after deployment.

### Collision Repair Experts

June 2023 - Sep. 2023

*Automotive Technician*

*Mississauga, ON*

- Diligently managed an online vehicle progress database, meticulously tracking and documenting repair progress across multiple stages, ensuring accurate and up-to-date records.
- Leveraged industry-standard equipment for comprehensive vehicle data scanning and recording, expertly conducting troubleshooting when necessary to maintain precise diagnostic accuracy.
- Conducted thorough examinations of a wide range of vehicles, utilizing advanced diagnostic tools and visual inspections to assess and meticulously record both visible and concealed damages, contributing to comprehensive repair documentation.
- Spearheaded process improvements resulting in an impressive 15% increase in shop efficiency, optimizing workflows by revising outdated procedures and eliminating redundant steps to enhance overall productivity.

## Projects

### Mapper Program (MappedOut) | C++, GTK, Glade

Jan. 2023 - Apr 2023

- Managed a team of 3 tasked with building a Geographic Information System (GIS) to analyze spatial data of over 20 major cities and present it to users in an interactive map over four months.
- Successfully implemented/applied A\* and Dijkstra's algorithms to optimize pathfinding, while also employing simulated annealing to tackle the travelling salesman problem with efficiency.
- Wrote mapping program mainly in C++, using the OpenStreetMap API and the EZGL library was used for map graphics. Also used the GTK graphics library and glade to enhance UI.
- Managed project workflow with the help of Git.

### DE1-SoC Game (Amazing Brick) | C, Arm Assembly

Jan. 2023 - Apr 2023

- Led a team of 2 to create a game written in C capable of running on the DE1-SoC board.
- Game employs arcade style physics, where the player is responsible for moving a block through various floating platforms with difficulty increasing with progress.

**Other Projects:** Portfolio Website (React, HTML, CSS), Phone Book Library Manager (C), Reversi with CPU mode (C, AI), Tic Tac Toe (C++), Music Library Manager (C++), ARM CPU (Verilog), Hangman (Java)

## Technical Skills

**Languages:** C, C++, Java, Python, Verilog, Arm Assembly, MATLAB, HTML/CSS

**Technologies/Frameworks:** Linux, MacOS, Windows, GitHub, Git, GitLab, ModelSim, Intel Quartus Prime, VS Code

## Awards

- Edward S. Rogers Sr. Admission Scholarship (\$2000) (UofT).
- Elliott M Wilson Scholarship (\$5000) (UofT).
- Renaissance Award for the highest grades across four disciplines in grade 12 (Louise Arbour S.S.)
- Ontario Scholar award for maintaining 80% or above in six grade 12 courses (Louise Arbour S.S.)
- Scholarship for academic excellence nationally amongst children of employees (\$300 - \$500)