

# TARUN JOHAL

604-783-2323

tt2@sfu.ca

Surrey, British Columbia

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## About Me

A dedicated Computer Science student who is eager to apply academic knowledge to real-world challenges, gain hands-on experience, and contribute to innovative projects. Skilled in problem-solving, teamwork, and adapting to dynamic environments, with a commitment to continuous learning and professional growth.

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## Experience

### Autonomous Robotic Car, April 2024

- Built and programmed a robot buggy using a Raspberry Pi 4 and Python for autonomous navigation and motor control
- Collaborated within a group to design, assemble, and program the robotic car, effectively delegating tasks and integrating individual contributions for a successful project
- Wrote custom Python scripts to manage motor directions and speeds, leveraging GPIO libraries to interface with hardware
- Configured and tested the Raspberry Pi to ensure real-time communication with the motor controller board and sensor
- Assembled and optimized hardware components, including motors, wheels, and battery packs, ensuring precise movement and stability
- Developed and debugged GPIO scripts to test and refine robotic movements, including forward, backward, and turning actions
- Demonstrated problem-solving by diagnosing and addressing wiring issues, motor misalignments, and power management

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## Education

### Sept 2024-Present

Simon Fraser University

### Bachelor's of Applied Sciences

### Jan 2023- Aug 2024

Douglas College

### Certificate in Computing Science

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## Expertise

- Languages: Python, C, C++, SQL, Java
- Tools & Platforms: VS Code, VS Studio, Raspberry Pi
- Platforms: Windows, Linux, MacOS

## Relevant Courses

- Data Structures & Algorithms
- Object-Oriented Programming
- Designing with Raspberry Pi