

# Satvik Garg

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## Technical Skills

### Programming Languages

C++, C#, Python, Java, C, Dart, JavaScript, CSS, HTML, React, MySQL

### Software & Technologies

Git, GitHub, LaTeX, Figma, Firebase, Unity, XAML, Node, Linux

## Technical Projects

### ConnectPharma 📱

Apr 2021 - Present

MOBILE APPLICATION DEVELOPER

[Dart](#), [JS](#)

- Developed an app to connect pharmacists to employers and vice-versa using Dart, Flutter, JavaScript and Firebase
- Utilized Firestore and Firebase Storage to handle users' data and images, in addition to **Google Cloud APIs** such as Places and Distance Matrix to quicken the Sign-Up process by auto-completing addresses
- Abided Firestore Security rules and used firebase Authentication to maximize application security
- Collaborated with a professional designers, Pharmacists and Pharmacies to create the UI oriented towards users in Figma

### Endless Enemies 📱

May 2020 - Nov 2020

GAME DEVELOPER

[C#](#), [Xaml](#), [Unity](#), [Node](#)

- Developed a top-down shooter game where the user must shoot enemies spawning around them
- Used the **A\* search algorithm** to control enemy AI's movements, giving the enemies the ability to pursue the player using the smallest path and spawn in tiles where the player may be camping
- Utilized the **Flood Fill algorithm** to create random maps without inaccessible paths as well determining the locations of deployed weapons and pick-up item

### VEX Robotics Competition Team 📱

Sep 2018 - Jun 2020

SOFTWARE DEVELOPER

[C](#), [C++](#), [PROS Purdue API](#)

- Programmed custom robots to compete in an international and inter-school robotics competition, ultimately **qualifying for the 2019-2020 season world championships**
- Competed against **720 teams** from around the world and achieved **3rd position in Canada** for our combined driver and autonomous score
- Extracted information from several sensors such as cameras, potentiometers, gyroscopes, and encoders to allow the robot to know its location on the field at all times
- Improved robot consistency by up to **90%** using PID control and Pure Pursuit algorithms for precise and smooth movements of various robot components
- Increased win-rate by **75%** by automating stacking and lift control as well as movements which require precise actions

## Leadership Experience

### SFU Satellite Design Team (SFUSAT) 📱

Sep 2021 - Present

GROUND STATION SOFTWARE DEVELOPER

- Collaborated with a team of 7 to build a SATNOGS ground station for SFU Satellite Design teams ALEASAT project
- Coordinated with other SFU departments to organize 3D prints for the antenna rotator placed on the ground station
- Integrated the SATNOGS software and used technologies such as SDR's, GPredict and GNU Radio to control the ground station
- Programmed the connection between the ground station and the SATNOGS network using a Raspberry Pi

### Python 101 Camp

Oct 2020 - Dec 2020

ONLINE PROGRAMMING MENTOR

- Taught students from the age of 10 to 15 about fundamental programming concepts in Python, including functions, loops and basic data structures
- Conducted hands-on activities like creating a Python script to automate the organization of computer folders, explaining every step in-detail along the way
- Devised a one month plan after the end of the camp to help students stay on track and learn the beauty of programming

## Education

### Simon Fraser University

Sep 2021 - Apr 2025

BACHELOR OF SCIENCE IN COMPUTING SCIENCE | FULL RIDE SCHOLARSHIP

RELEVANT COURSEWORK: DISCRETE MATH, INTRO. CMPT. SCI II, DATA STRUCTURES, WEB

[Burnaby](#), [BC](#)

CLIENT-SIDE DEV 1, INTRO. SOFT. ENG