Satvik Garg

⌂ BC, Canada, V3S 7V6 | ▢ +1 604-764-5434

▢ sgarg15 | ✉ sat.garg03@gmail.com | ▢ SatvikGarg15

Technical Skills

Programming Languages	C, C++, C#, Python, Dart, JavaScript, Java, 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 atenna 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