

# Param Singh

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## EDUCATION

### University of Victoria

Victoria, BC

*Bachelor of Software Engineering, Software Engineering*

*Sep. 2022 – Apr. 2027*

- Relevant Courses: Foundations of Computer Science, Data Structures and Algorithms I & II, Operating Systems, Software Development Methods, Software Testing, Database Systems, Computer Networks, Control Theory I

## TECHNICAL SKILLS

**Programming Languages:** Java, Python, C, C#, JavaScript, HTML/CSS, R, SQL, MATLAB, Assembly, ROBOTC

**Frameworks and Databases:** MySQL, PostgreSQL, MariaDB, NodeJS, DiscordJS, Selenium, JUnit, Pitest, Mockito

**Developer Tools:** Git, GitLab, IntelliJ, Visual Studio/Code, Jira, Bash, Vim, Replit, LaTeX, Markdown, Powershell, Google Cloud Platform, Microsoft Platform

## WORK EXPERIENCE

### Undergraduate Research Assistant | *Python, Linux*

Jan 2024 – Apr 2024

*SOLIDS Lab*

*Victoria, BC*

- Writing a research paper on quantum-resistant protocols and encryption while building a secure underwater communication suite.
- Researching topics such as TCP/IP, UDP, and many more to view their applications to encryption
- Assisted with threat modeling and instruction detection using Machine Learning Models in Python.
- Applying attacks on sensors using Kali Linux with methods such as DDOS or electromagnetic wave attacks.

### Software Developer | *Unity, C#, VR*

Aug. 2023 – Nov. 2023

*Dream EliXR*

*Victoria, BC*

- Showcased skills with a demo of a small-sized local network one-on-one First-Person Shooter Game.
- Developed scenes using C# and deployed assets using Unity at an accelerated pace to meet milestones.
- Collaborated with a team of six to plan the development of a horror escape room VR game set for release in 2026.
- Achieved proficiency in C# and Unity within one month, demonstrating rapid learning and adaptability.

## PROJECTS

### SportMatch | *SQL, Python, Kotlin, JUnit, Git*

May 2024 – Current

- Designed and implemented the backend using MySQL, including creating multiple ERD diagrams to ensure efficient database design.
- Developed a Python script to generate a CSV file of 5,000 entries, to simulate user activity for testing purposes.
- Created the application's frontend using Kotlin and ensured its functionality and reliability through extensive testing with the JUnit framework.

### ServerManager Discord Bot | *Javascript, NodeJS, DiscordJS, Git*

July 2023

- Developed a Discord bot using DiscordJS, deployed and managed with NodeJS.
- Implemented server management features, enabling users to efficiently manage their server roles.
- Integrated the OpenAI API, utilizing the advanced davinci-003 model to provide basic AI-driven functionality.

### Solar Panel Phone Charger | *Blender*

Jan 2022 – Apr 2022

- Created a solar panel phone charger using an Arduino and prototyped it on Blender.
- Researched about a product and used multiple sources to figure out how fast potential charging could be (5 watts).

## EXTRA CURRICULAR

### Software Developer

June 2023

*University of Victoria Engineering Competition*

*Victoria, BC*

- Achieved 4th place in an 8-hour coding competition.
- Developed a website using HTML and CSS on Replit, integrating the Google Maps API for enhanced functionality.
- Collaborated with team members on Replit to brainstorm innovative features, enhancing the overall user experience in a live, real-time environment.