

Harsimar Singh

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Computer Science student with 4+ years of programming experience and 1+ years of experience in developing projects using Unity Game Engine, both independently and as part of a team. Experience with software and game development, combining linear algebra as well as different data structures and algorithms. Passionate for a career as a full-time software developer.

Education

University of Toronto (GPA - 3.93/4.0)

September, 2022- August, 2026 (Expected)

Relevant Courses : Data Structures and Algorithms, Software Design, Computer Organization, Theory of Computation, Linear Algebra

Currently Pursuing :

- Honours in Bachelor of Science, Computer Science (Specialist)
- Honours in Bachelor of Science, Mathematical Sciences (Major)

Awards :

- University of Toronto
 - **Dean's List Scholar (2023)** - Cumulative GPA of 3.5 or higher at the end of the academic year.
 - **Scholar's Award** - Scholarship awarded in recognition for being an exceptional student.
 - **Honour Roll (2023)** - Achieved the highest grade (A+) in more than 3 Computational and Mathematical Science courses.
- Castlebrooke Secondary School
 - **Canadian Team Mathematics Contest (2021)** - Worked in a team to provide insight into workaround strategies to approach specific problems and achieved 3rd position out of a total of 48 competing schools.
 - **Euclid Mathematics Contest (2021)** - Showcased exceptional problem solving skills and attained a rank of 18 out of a total of 20,000 competing participants.

Experience

Tutor

July, 2022 - Present

Self-employed

- Provided **tutoring to ~20 students** in areas of Mathematics and Computer Science by applying a range of teaching strategies, including active learning and conducting assessments.
- Adopted inclusion learning method to cater to diverse student needs which contributed to **~30% average increase** in students' school evaluations.

Unity Game Development

Feb, 2022 - Present

Freelance Programmer

- Worked on a variety of intermediate Unity projects on a freelance basis to hone my skills in relation to **OOP design, shader graph and visual effects**.
- Obtained insight as to how to work in a team and **collaborate** with other people on a big project.
- Attained the skills to manage a big project using **clean and concise code** which helped in accelerating the development by making the jobs of other programmers on the team easier.
- Utilized various **testing techniques** to identify and **rectify any bugs** that resulted in the projects being robust and bug-free.
- **Generated test reports** and **prepared documentation** that served as the foundation for **advancing the project**.

Projects

Check out <https://harsimarsinghg.github.io/> for my personal website.

Raining Bullets (Game Prototype) - Unity Engine, C#, Unity Netcode Services

- **Designed a prototype** for a co-op bullet-hell action game with various **particle effects** achieved through shader graphs and pixel art.
- Implemented various **compelling game mechanics and level design** which resulted in multiple **positive reactions** towards the demo of the game.
- Acquired knowledge of networking in multiplayer games through experimentation and development using **Unity Netcode Services** and implemented a multiplayer online co-op mode in the game using **RPCs** and **Unity's Lobby and Relay Services**.

Technical Skills

- **Coding Languages** : Python, Java, C#, C++, HTML/CSS
- **Libraries** : Pygame, Numpy, Unity's Netcode and Relay Services
- **Frameworks** : .NET
- **Developer Tools/ Engines** : Git/Github, Unity Engine