Simone Ghosh

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Skills

- **Programming Languages:** Python, JavaScript, TypeScript, C++, Java, Go
- **Tools & Frameworks:** Git, GitHub, MongoDB, Express, React, Node.js, REST APIS, HTML/CSS
- **Languages:** English, French

Projects

Notes App – Full-Stack MERN Application
- Developed a responsive note-taking web app using React, Node.js, Express, and MongoDB.
- Designed and deployed RESTful APIs, enabling secure CRUD operations.
- Integrated Axios for asynchronous data handling, reducing client-server latency by **20%**.

Interpreter in Go – Systems Programming
- Implemented a full interpreter for the Monkey language in Go, including lexer, parser, and AST.
- Applied compiler-design principles to optimize recursive evaluation and memory efficiency.

Geometry Dash – Java Game
- Built a 2D platformer using Java Swing and AWT graphics, implementing physics-based movement and collision detection.
- Distributed to **100** players and collected feedback that guided two gameplay updates.

Poisonous Pyramids – Educational Game in Python
- Created an interactive safety-education game with Pygame, teaching hazard recognition to children.
- Released to **75** users and achieved **90%** positive feedback from educators.

Experience

Web Developer - School Newspaper   Sept 2023 – Jun 2024
- Built the newspaper website using AstroJS for mobile-friendly UI.
- Integrated Directus CMS and collaborated with colleagues through GitHub.
- Increased site traffic by **60%**, reaching **1,500** unique monthly visitors.
- Collaborated with content creators in agile sprint planning, defining user stories and acceptance criteria to align website updates with editorial calendar.
- Empowered junior developers through targeted training in modern web development techniques, resulting in streamlined content integration processes.

Leisure Skate Location In-Charge - City of Toronto   Jan 2023 - Mar 2025
- Led **100-200** participants through structured skating sessions.
- Coordinated team schedules and ensured safety compliance.

Awards

- Canadian Computing Contest Honour Roll: Top **2%** of 6242 contestants.
- Canadian Senior Math Contest Honour Roll: Top **1%** of 16805 students.
- Schulich Leader Nominee: Canada's premier STEM scholarship recognizing innovation and leadership.
- President's Scholarship – University of Waterloo: Academic excellence - Admission Average: **97%**.

Leadership

Co-President   Sept 2023 - Jun 2025
Visual Arts Council
- Overseeing the planning and execution of major student-led initiatives, engaging over **500** participants and led a team of **25** council members.

Education

Systems Design Engineering (Bachelors of Applied Science)   2025 - 2030
University of Waterloo
- Relevant Courses: Intro to Design, Intro to C++