

Savir Singh

 savirsingh.com

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EDUCATION

University of Toronto

Honours Bachelor of Science

Toronto, Canada

2025 – 2029

- Intending to pursue Computer Science + Mathematics double major

- Relevant coursework: Advanced Theoretical Calculus With Proofs, Advanced Linear Algebra, Introduction to Computer Science, Mathematical Expression and Reasoning for Computer Science, Introduction to Statistics and Data Science

EXPERIENCE

General Robotics

Software Engineer Intern, AI Model Research

Kirkland, USA

September 2024 – December 2024

- Worked with engineering mentor/team to expand the robotic perception system by adding 3 new ML models
- Implemented action recognition model classifying actions as positive/negative using IBM PyTorch library; ensured data quality and developed data classification system for robotic sensor data to streamline model selection and feature tracking
- Enhanced visual odometry model by 15% by implementing Princeton's Deep Patch Visual Odometry (DPVO) pipeline

University of Waterloo

Software Engineer Intern & Student Researcher

Waterloo, Canada

January 2024 – April 2024

- Worked with a team of 2 PhD students and a professor on a software security project, FuzzSlice
- Participated in technical sessions to learn and implement best practices for code quality; reduced demo prep time by 60%
- Added support for C++ repositories to the project; increased dataset coverage by 30% and improved input quality
- Built Python Flask + React.js web app and demo video used in the ICSE 2024 (Portugal), viewed by 2,000+ attendees

American Inn Ozark

Backend Engineer Intern

Ozark, USA

June 2023 – September 2023

- Wrote automation scripts that reduced update delays from 30 minutes to under 2 seconds and reduced wait times by 35%
- Developed a Python Flask reservation system with real-time input sanitization and classification to ensure data quality

PROJECTS

Math Contest Repository

October 2023 – Present

 mathcontestrepository.pythonanywhere.com

- Built an online math contest platform that boasts 500+ registered students, 700+ community members, and 1,400+ problems, generating 10,000+ monthly impressions, partnered with Desmos to add online calculators
- Added leaderboard, automated data classification, and problem type tagging for user personalization

Clonio AI

May 2024 – Present

 Clonio AI

- Developed an iOS app turning users into AI chatbots based on previous chat logs; top 25 on North American/Swiss App Stores in productivity category, achieved 200+ downloads in first week; processed over 100,000 messages
- Implemented fine-tuned Gemini backend and performed user data classification for fine-tuned LLM persona generation, improving first-use retention by 90%
- Interviewed by Village Media, featured on 10+ news sites, and awarded a \$3,500 Ontario government grant

Independent Research

April 2024 – Present

- Investigated the Odd Perfect Number (OPN) conjecture; independently derived Euler's result on their form
- Prototyped algorithm with Carnegie Mellon professor to develop heuristics for generating addition-subtraction chains
- Conducted data analysis for number theory datasets to support heuristics and algorithm validation

Volcano Judge

October 2022 – January 2023

 savirsingh/volcano-judge

- Developed online judge platform supporting Python/C++ to teach algorithmic thinking
- Implemented sandbox for Python programs to secure the platform, built a RESTful API for grading technology
- Designed a secure grading system, including automated data validation via comparison checks for student submissions

ACHIEVEMENTS

Top 5%, Canadian Computing Competition (Senior)

2024-2025

3x First Place & Internship Invitee, PEO Mississauga Chapter High School Coding Contest

2021-2023

\$200 Second Place Prize From Replit, Hack the North '23 (for building BYTESense)

2023

Gold Medal (2023) & Silver Medal (2025), Halton Skills Coding Competition

2023, 2025

SKILLS

Languages: Python, C/C++, R, Java, SQL, HTML, CSS, JavaScript, Swift

Frameworks/Tools: Flask, Django, React.js, Git, Linux, Docker, Tensorflow, SciPy, PyTorch, NumPy, Pandas, Matplotlib

Concepts: Algorithms & Data Structures, Security, LLMs, Simulation, ML Inference, Data Pipelines, Debugging

Data Management: Data Quality, Master Data Management, Data Cataloging, Data Classification, Input Sanitization

Personal Skills: Quick problem-solving, strong communication & interpersonal skills, teamwork