

Hasnain M. Syed

(+1)236-965-2941 | hasnain.syed@mail.utoronto.ca | [linkedin.com/in/hasnainms](https://www.linkedin.com/in/hasnainms) | github.com/hasnainmsyed | [Filament](#)

Education

University of Toronto

Toronto, ON

Bachelor of Applied Science - Machine Intelligence + PEY Co-op

Sep 2024 - Apr 2029

Relevant Coursework: Data Structures & Algorithms, Linear Algebra, Calculus (proof-based), Hardware/Circuit Design, Engineering Design, Structure & Materials Analysis

Skills

Programming Languages: Python, C/C++, JavaScript, Rust, TypeScript, HTML/CSS

AI & ML: NumPy, Pandas, Scikit-learn, TensorFlow/Keras, PyTorch, Gradio, LangChain, CrewAI

Software Engineering: Next.js, Flask, FastAPI, SQLite, Railway, Vercel, Git, Linux OS, API, Command Lines

Backend and Cloud: Databricks, Microsoft Azure, AWS, Google Cloud Platform

Hardware/Robotics: Raspberry Pi, Arduino, welding, circuit design, AutoCAD, wood work, System Verilog, RISC-V

Professional: B2B Sales, Public Speaking, Presentation, Time Management, Leadership, Communication

Languages: English, Mandarin Chinese (native), Hindi/Urdu (B1), French (B1)

AI Programming Tools: Claude, Claude Code, OpenCode, Gemini CLI, Codex, Microsoft CoPilot

Experience

"sensor" - privacy-first voice dictation tool on Linux Systems

Aug 2026 - Present

AI Dev and Founder - Filament Platform Inc.

Toronto, Ontario

- Built a privacy-first, Linux-native dictation tool for speech transcription with a lightweight background daemon
- Packaged the application for Ubuntu/Debian with one-command installation and clean uninstallation
- Engineered for GNOME Wayland, KDE, X11, bare TTY environments with 700ms latency on CPU-only hardware
- Open-sourced the project under MIT, documenting installation, configuration, and demonstrations for end users

Luminous - Agentic Web-Search System

Jun 2026 - Present

AI Dev and Founder - Filament Platform Inc.

Toronto, Ontario

- Built structural information extraction tool "Luminous" with automation and agentic AI
- Created central data contract that stores key information and propagates across a four-layer search pipeline
- Combined deterministic scoring and logic with LLM to achieve consistent output at low costs
- Added retry logic, timeout handling, and structured-output prompting to ensure graceful failure recovery
- Achieved up to 101 named contacts extracted in a single run after upgrading to a stronger LLM backend

Filament - Scholarship Consulting Chatbot

Mar 2026 - Jun 2026

AI Dev, Sales Lea and Founder - Filament Platform Inc.

Toronto, Ontario

- Built end-to-end customized web-scraping scripts and RAG pipelines for 10+ scholarship websites
- Delivered scholarship navigation chatbot MVP ([demo link](#)) for students @ George Brown Polytechnic
- Conducted 20+ onsite interviews, 5 product sales initiatives and sent out 50+ sales emails

Competitions and Awards

Vanguar - Autonomous Fire Detection Robot (\$5000 Scholarship)

Feb 2026 - Apr 2026

Software and Hardware Dev - University of Toronto Engineering

Toronto, Ontario

- Engineered the software layer and Flask-server-based data communication between hardware and control systems
- Conducted 20+ software and hardware pressure testings after contribution to hardware assembly and wiring
- Restructured the team's submission strategy after identifying the committees' emphasis on growth over tech
- Achieved top 2 among 30+ competing teams, team awarded **\$5000** Rowe Award Scholarship

Winter Olympics Course Competition Robot

Jan 2026

Software and Hardware Dev - University of Toronto UTRA Hacks

Toronto, Ontario

- Engineered a line-tracing algorithm on Arduino utilizing infrared sensors to detect and follow the pathing
- Assembled the robotic components like wheels, circuitry, and 3D-printed parts while sustaining **1kg** of weight
- Built an HTML/CSS assessment tool to track robot performance, including track-error and collision frequency

Chess AI Engine

Nov 2025

AI and Algorithm Dev - University of Waterloo ChessHacks

Waterloo, Ontario

- Built a deep learning-based evaluation function using PyTorch and CNNs to analyze **500k+** board positions
- Integrated CNN evaluations with alpha-beta pruning to achieve **1400 ELO** strength during a 30-hour sprint
- Led a team of 3 with coordinated strategies to deliver a functional AI agent under strict hackathon constraints

Boson-Duo - An AI Debate Platform

Oct 2025

AI and Software Dev - Boson AI Hackathons

Toronto, Ontario

- Prototyped a multi-chatbot debate system featuring automated prompt routing and argument generation
- Developed Flask/Gradio infrastructure for seamless integration between different LLMs and user frontend
- Delegated tasks for a team of 4, facilitating agent and architecture prototyping workflow within a 36-hour sprint

Nuclear Plants Optimization Strategy

Mar 2025

System Engineer - University of Toronto Nuclear Engineering Association Hackathon

Toronto, Ontario

- Optimized nuclear plant placement by analyzing geography data, infrastructure costs, and environmental impact
- Calculated cost estimates for nuclear fuels and operations to support data-driven and research-based site selection
- Awarded **First Place** for a comprehensive analysis balancing economic feasibility with sustainability

Smash-Bros Style AI Battle Agent (MAHA)

Feb 2025

AI Dev - UTMIST AI² Tournament

Toronto, Ontario

- Trained battle agent with **PPO-based reinforcement learning**, securing **top five** team ranking
- Programmed core architecture and devised the agent training strategy under a limited time-frame
- Implemented a robust state-action space to handle high-dimensional combat simulation complexity

Personal & Course Projects

Double Pendulum Neural ODE Solver

Sep 2025 - Dec 2025

Physics AI Dev - Ordinary Differential Equations Course, University of Toronto

Toronto, Ontario

- Built a NeuralODE architecture library to model non-linear physical systems with PyTorch torchdiffeq
- Developed a numeric solver in a Google Colab environment to simulate double pendulum dynamics and datasets
- Integrated differential equation solvers with deep learning frameworks to predict chaotic physical systems

24-point game NN Algorithmic Solver

Oct 2025 - Dec 2025

Personal Project

Toronto, Ontario

- Architected an LSTM Encoder-Decoder model in TensorFlow to predict mathematical sequence and logic
- Engineered a state-machine tokenizer to preprocess integers and operators into a suitable NN training format
- Developed a recursive solver in Python to explore **400,000+** permutations for large-scale data labeling