Akshay Krishna Sirigana

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Education

McMaster University **Sep. 2025 – May 2029**
Bachelor of Applied Science in Computer Science (Co-op) *Hamilton, Ontario*

Relevant Coursework

- Introduction to Python
- Computational Thinking
- Software Development
- Linear Algebra
- Discrete Math
- C programming & Linux
- Calculus

Experience

SysIdea Lab: Indian Institute of Technology- Gandhinagar **May 2022**
Robotics Research Intern *Gandhinagar, Gujarat*

- Contributed to interdisciplinary robotics research integrating software with mechanical systems, gaining hands-on experience at the hardware-software interface.
- Designed and prototyped robotic components using 3D CAD modeling, laser cutting, and 3D printing for rapid iteration.
- Assisted in experimentation, debugging, and performance analysis of robotics subsystems.
- Developed practical skills in embedded systems interaction and real-time software-hardware integration.

Projects

Argus | *AI-Powered Government Intelligence Platform Mac-a-thon 2026* **February 2026**

- Built a real-time platform that monitors government procurement signals, matches them to startup capabilities using semantic AI, and generates personalized outreach strategies.
- Developed an interactive 3D globe interface using Three.js and Framer Motion to visualize live global procurement data.
- Implemented AI matching pipeline using Gemini 2.5 Flash and semantic embeddings, achieving over 85% match accuracy with sub-3-second response times.
- Engineered full-stack application with Next.js and React on the frontend, FastAPI and Python on the backend
- Collaborated in a cross-university team of 4 from McMaster, TMU and the University of Toronto.

NeonDrift — Browser based Arcade Game DeltaHacks 2026 **January 2026**

- Developed a high-performance arcade runner game using vanilla HTML5 Canvas and JavaScript with zero external dependencies.
- Implemented dynamic difficulty scaling, combo chain scoring, and powerup systems (shield, magnet, slow-mo) for engaging gameplay.
- Built responsive cross-platform controls supporting keyboard, touch, and drag input for desktop and mobile play.
- Achieved a consistent 60 FPS render target with offline-capable PWA architecture.

Tejimola: The Blossom From Clay | *2D Narrative Adventure Game Unity, C#* **February 2026**

- Developed a 90-minute narrative-driven 2.5D adventure game in Unity celebrating Assamese folktale heritage, featuring 4 acts with exploration, stealth, rhythm, and boss fight mechanics.
- Architected event-driven systems including adaptive audio, JSON-based dialogue with branching choices, and a dspTime-based rhythm engine.
- Leveraged AI-assisted development (Claude Code) to accelerate prototyping, gaining practical insight into the capabilities and limitations of AI in software development workflows.

Technical Skills

Languages: Python, Java, C, C#, HTML/CSS, JavaScript, PHP, SQL
Developer Tools: VS Code, Google Cloud Platform, GitHub, Linux, Arduino
Technologies/Frameworks: Next.js, React, FastAPI, Tailwind CSS, Unity
Others: 3D CAD Modelling, 3D Printing, Laser Cutting

Leadership / Extracurricular

House Captain **2024**
School Student Council *JNS*

- Led house to win the Sports Trophy, Cultural Trophy, and overall House Trophy in a single academic year — a feat not achieved in the preceding 10 years.
- Organized and coordinated inter-house events, delegated responsibilities, and motivated team members across sports and cultural competitions.