Ivan Kirischian

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Website: bigbirdy7.github.io/myprojects

About me:

I am a high school student with a passion for robotics coding and tech, seeking an opportunity to teach and mentor younger students**.** I am always eager to share my experience in designing, building, and programming robots and electronics projects. I am a fast learner, good communicator, quickly adapt to new environments, and a team player.

Skills

- Robotics/Electronics: Aurdrino, Mbot, Microbit, LEGO Mindstorms
- Programming: Python, C++, Java, and Block-based Coding (E.g. Scratch)
- Experienced with CAD tools like Tinkercad and SketchUp
- Strong communication skills and patience when teaching others

Awards

McMasters Sumo Bot Competition: *First Place* *– [January, 2025]*

- Main developer for a robot controller to compete in an autonomous sumo wrestling competition.
- Collaborated with teammates to: build, debug, and optimize the robot operations

Personal Projects (bigbirdy7.github.io/myprojects)

- **Robot Car with Laser Turret**
  Built a mobile robot with a laser turret controllable by a smartphone app, re-designed servo motor electronics to achieve our project goal in a limited timeframe.
- **Real Life Portal Turret (In-progress)**
  A 3d printed turret that tracks a person as they walk through the room and “shoots” at them with LED lights. I greatly improved my soldering skills when making the project..
- **Math Quiz Device for Kids**
  Created an educational game using an Arduino, keypad, and LCD to help my younger sister practice math, complete with a point system and a custom 3D-printed case.
- **Personal AI Assistant**
  Desktop AI assistant using Groq API, microphone input, and a text-to-speech model. Inspired by the character GLaDOS from Portal 2. I am planning to integrate it into the Real Life Portal Turret.

Education

Thornhill Secondary School – Grade 10 Student
Graduation: 2027

- Relevant Courses: Computer Science 97%, Technological Design 95%, Computer Engineering 100%
- Member of Robotics Club and Coding Club

Math tutor game:

My sister wanted to practice math questions, but I wasn't always there to write them down for her. For her birthday I decided to make a toy using an arduino, keypad and LCD screen to generate her questions.

Plan:

Acquire parts

Code

Design Case

Debug code and add score system

What I learned:

Improved debugging skills: There were many errors with the backspace feature that I needed to fix

Learned how to use comments effectively: After forgetting what a part of my code did, I had to rewrite it. Learning from my mistake, I started using comments.