AVANEESH SIRIKONDA

Aurora, Illinois

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IMSA sophomore passionate about CS & engineering; I build research-backed prototypes and interactive software. Seeking research and internship opportunities.

EDUCATION

Illinois Mathematics and Science Academy (IMSA) — **Expected May 2028**
High School Diploma — **Focus: Engineering & Computer Science** — *Aurora, IL*

TECHNICAL SKILLS

- **Programming**: Python, JavaScript, HTML/CSS, p5.js
- **Hardware & CAD**: Basic electronics, Fusion 360, prototyping
- **ML & Tools**: Teachable Machine, ml5.js, Git/GitHub, Bootstrap

PROJECTS

Cooling Glove for Tendonitis in Musicians | *Wearable Prototype, Fusion 360* — **2024**
– Researched the prevalence and causes of tendonitis in musicians, identifying repetitive strain in finger joints as a key factor.
– Interviewed local manufacturers and musicians to gather real-world feedback and refine design requirements.
– Designed the glove using Fusion 360 to ensure ergonomic fit and comfort during extended practice sessions that cool the finger joints.

Emotion to Emoji Web App ⬈ | *HTML, CSS, JavaScript, ml5.js* — **2023**
– Developed an interactive web app that uses a Teachable Machine model to classify hand gestures through a webcam.
– Implemented real-time image capture and mapped recognized gestures to emojis and motivational quotes.
– Integrated speech synthesis to provide audio feedback of the prediction, making the app more engaging and accessible.

Curved Solar Panel Design for Renewable Energy | *Hardware Prototyping, CAD, Simulation* — **2023**
– Researched solar inefficiencies caused by flat panels receiving limited sunlight throughout the day.
– Proposed a curved solar panel geometry to capture sunlight from multiple angles without relying on motorized trackers.
– Built a working prototype using mini-solar panels mounted on a curved frame.
– Simulated sunlight movement across the panel throughout the day and collected output data.

EXPERIENCE

VEX Robotics Team — Builder & Driver — **2021 – Present**
Aurora, IL
– Constructed and tested robot structures for durability and competition performance.
– Operated as match driver; executed strategy under pressure with coordinated teamwork.

FIRST Lego League (FLL) — Programmer & Builder — **2022 – 2024**
Aurora, IL
– Programmed Python missions and contributed to reliable mechanical builds for challenges.

Volunteer Robotics Mentor — **2023 – 2024**
Aurora, IL
– Led sessions at the local library to introduce younger students to robotics and programming.

AWARDS & HONORS

FIRST Lego League (2022–2024): Champion's Award Finalist, Engineering Excellence, Core Values (Regional); Robot Design — 3rd (State)
VEX Robotics (2021–Present): Tournament Champion, Tournament Finalist, Sportsmanship (District)
Illinois Solo & Ensemble (2022–2024): 3-time Number One Award
Academic Excellence (2019–2024): Maintained straight A's prior to IMSA

LEADERSHIP / EXTRACURRICULAR

- **Leadership**: Captain, VEX Robotics Team (2023–Present) — mentored new members and guided design & match strategy.
- **Leadership**: Innovation Project Leader, FLL (2022–2024) — coordinated research/presentation contributing to multiple awards.
- **Clubs & Activities**: VEX Robotics, MathCounts, Ping Pong, Taekwondo, Web Development