AVANEESH SIRIKONDA

Aurora, Illinois

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IMSA sophomore focused on data science and machine learning, with experience analyzing sensor data and building ML-driven prototypes for real-world problems.

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
- **CAD**: Fusion 360, OnShape, Tinkercad
- **ML & Tools**: TensorFlow, Teachable Machine, ml5.js, Git/GitHub, Bootstrap

EXPERIENCE

VEX Robotics Team — Builder & Driver   **2021 – Present**
Aurora, IL
− Constructed and tested robot structures for durability and competition performance.
− Iterated mechanical designs based on observed failure points.
− Operated as match driver, executing strategy under pressure with coordinated teamwork.

Python Data Analysis   **2025 – 2026**
Aurora, IL
− Analyzed real-world datasets using Python for cleaning, exploratory analysis, and interpretation.
− Applied statistical methods and data visualization to identify trends and patterns.

Volunteer Robotics Mentor   **2023 – 2024**
Aurora, IL
− Led sessions introducing students to robotics concepts and programming fundamentals.

PROJECTS

Personal Portfolio Website ↗   **2026**
− Designed and built a responsive single-page portfolio to showcase robotics, CAD, and software projects.
− Implemented dynamic project filtering and modal-based project views using vanilla JavaScript.
− Developed smooth animations and interaction effects to improve usability.

Micro:bit Workout Phase Coach   **2025**
− Collected time-series heart-rate and accelerometer data during exercise sessions.
− Trained a Python ML model to classify workout phases from physiological patterns.
− Generated real-time feedback instructing users to adjust workout intensity.

Autonomous Campus Monitoring Drone   **2025**
− Designed a drone concept for campus monitoring and anomaly detection at IMSA.
− Created a complete CAD model of the drone frame and component layout.
− Outlined a Python-based ML pipeline for analyzing aerial sensor and video data.

AWARDS & HONORS

- **FIRST Lego League (2022–2024)**: Champion's Award Finalist; Engineering Excellence; Core Values; Robot Design Award
- **VEX Robotics (2021–Present)**: Tournament Champion; Finalist; Sportsmanship; Excellence Award
- **Illinois Solo & Ensemble (2022–2024)**: 3-time Number One Award
- **Academic Excellence (2019–Present)**: Maintaining Straight A's

LEADERSHIP / EXTRACURRICULAR

- **Captain, VEX Robotics Team (2023–Present)** – mentored members and guided design and match strategy.
- **Innovation Project Leader, FLL (2022–2024)** – coordinated research and presentations contributing to awards.
- **Clubs**: VEX Robotics, IMSA.ai, Varsity Table Tennis, AI Research Cohort, Web Development, IMSA Society of Engineers