# Shayan (Shaan) Mukherjee

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## Objective

Curious and motivated Electrical Engineering major with experience in fast-paced, interdisciplinary robotics teams. Seeking hardware engineering internship working on embedded systems or chip design for Summer 2024.

## Education

**Georgia Institute of Technology | Atlanta, GA** August 2023 – Present

*Bachelor of Science in Electrical Engineering,* GPA: 3.3/4.0 *Expected Graduation May 2026*

**Hamilton High School | Chandler, Arizona** August 2019 – May 2023

GPA**:** 4.00/4.00

## Skills

**Programming:** Java (proficient), Python (proficient), C++ (intermediate), C (beginner)
**Hardware:** Raspberry Pi, Arduino, Oscilloscope, Breadboard, Power Electronics
**Software:** NI LabVIEW, SolidWorks, EagleCAD, GitHub, Visual Studio, MATLAB, KiCAD, LTspice, Office Suite
**Professional Organizations:** Institute of Electrical and Electronics Engineers (IEEE)
**Communication:** Design proposals, technical reports, instruction manuals, presentations
**Languages:** English (fluent), Bengali (conversational), Spanish (beginner), Hindi (beginner)

## Experience

**Georgia Tech Solar Racing**

*Battery Management Systems Team Member* August 2023 - Present

- Perform and design safety protocols for custom-made Li-ion battery pack for Solar Powered Vehicle
- Develop and debug firmware to enable BMS systems using TIVA processors

**Vex Robotics - Team 2647: “Endgame”**

*Team Captain and Lead Designer* *May 2019* - May 2023

- Enhanced robot’s autonomous functions by integrating sensors (gyro, LiDAR, pressure) through hardware design
- Led Team 2647X to rank #1 in Arizona, and #1 in the world in the Skills Challenge in 2021 - 2022 season

**Podar International School (PIS) Robotics Club**

*Founder and Head Mentor* *May 2021 - September 2022*

- Started robotics club to establish project-based learning at a traditional, exam-oriented school in Mumbai
- Developed curriculum and taught biweekly online classes of 25-30 students in robotics, physics, and math

## Projects

**Stationary Bike Energy Charging Station**

*Hardware/Electrical Team Member* August 2023 - Present

- Collaborating with team to build a stationary bike using supercapacitors and power electronics to charge devices
- Developed circuitry for voltage-mode control for control algorithms for efficient USB Power Delivery
- Integrated SEPIC (Single-Ended Primary Inductor Converter) to regulate voltage of power generated by a motor

## Relevant Coursework

**Digital System Design:** Design circuits with boolean algebra, functionality of logic gates, number systems, registers, memory storage, state machines, counters
**Mathematics**: Linear Algebra, Differential Calculus, Integral Calculus, Multivariable Calculus, Differential Equations