

Armaan Gera

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EDUCATION

University of Pennsylvania - School of Engineering and Applied Science
Candidate for B.S.E. in Computer Engineering

Philadelphia, PA
Expected 2029

EXPERIENCE

Penn Electric Racing - University of Pennsylvania FSAE Team
Hardware Rookie (Power Delivery / PDU Subteam)

Philadelphia, PA
Sep 2025 - Present

- Designed the 48V to 5V regulation used for the car's low-voltage electronics, with input protection and filtering for the new 48V LV architecture.
- Designed schematics in Altium and LTspice; assisted in assembly of boards; worked on soldering, wiring, and debugging on PDU related hardware.

56727D Atlas - VEX V5 Robotics Competition Team
Hardware Lead

Morganton, NC
Aug 2022 - May 2025

- Led CAD & build across 8+ robot iterations over 3yrs; ran project management (schedules, design reviews, BOM).
- Oversaw assembly, wiring, inspections, spares, and pit operations to keep the robot match-ready.
- Won 31 awards; NC Skills & State Champions; Worlds division semifinalists; ranked #35/12,000+ in Skills.

PROJECTS

HexaR - Hexapodal Robot Research | *Bowman Brockman Grant*
Project Lead

Charlotte, NC
Aug 2024 - May 2025

- Designed and prototyped a 3D-printed hexapod, modeling the chassis and tri-jointed legs in Fusion and assembling multiple revisions.
- Iterated leg geometry and gait control through walk testing, adjusting link lengths & joint placement to reduce stalling and improve stability and smoothness.

StepLight - Mobile + Wearable AI pedestrian-signal detection
Hardware Lead & Developer

Morganton, NC
Aug 2024 - May 2025

- Integrated & tuned a TensorFlow Lite for on-device, offline inference of pedestrian signals.
- Built a Python/OpenCV pipeline for TFLite with an adjustable confidence cutoff.
- Shipped a React Native interface streaming decisions over Bluetooth with haptic & audio cues for VI individuals.

ThinkingEDU - Online classroom & CMS | *FBLA Website Dev (7th Nationals, 3rd NC)*
UX Design Lead & Developer

Charlotte, NC
Sep 2023 - Jun 2024

- Built a Next.js + TypeScript platform on MongoDB for courses, grading, and publishing; designed in Figma.
- Implemented JWT authentication with route guards and role-based access for admins, teachers, and students.

Skills

Fabrication: Fusion 360; Onshape; FDM 3D printing; Laser cutting; Hand tools and assembly; Rapid prototyping

Hardware: Altium; LTSpice; PSpice; PCB design & layout; Oscilloscopes; Soldering; Debugging

Software: Java; Python; JavaScript/TypeScript; React; React Native; Next.js; Node.js; Flask; SQL (SQLite); Redis; Git; Linux; REST APIs; WebSockets/SocketIO