

Aariv Mody

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EDUCATION

Cornell University, College of Engineering, Ithaca, NY

May 2028

Bachelor of Science in Electrical and Computer Engineering, **GPA: 4.19**

Relevant Coursework: Digital Communications Design, Signals & Systems, EM Fields & Waves, Microelectronics, Embedded Systems, Circuits, Digital Logic & Computer Organization, Machine Learning, OOP & data structures

In-Progress: Analog IC Design, Complex Analysis, Information Theory, Optimal System Design, Game Theory

PROFESSIONAL EXPERIENCE

Laboratory for Laser Energetics (LLE), University of Rochester, Rochester, NY

Undergraduate Intern

May 2026 - August 2026

- Built a custom MATLAB GUI and wrote analysis scripts to streamline experimental data processing, enabling efficient import, visualization, and analysis of oscilloscope and image-based data
- Contributed to technology development of a novel, x-ray streak camera with picosecond-scale imaging to be used as a diagnostic in nuclear fusion experiments
- Analyzed the diagnostic's instrumentation data & presented findings at meetings to guide subsequent experiments

Undergraduate Intern

May 2025 - August 2025

- Prepared and presented a poster at the Inertial Fusion Energy (IFE-SURE) symposium in Washington DC
- Operated a novel additive manufacturing system that uses laser fusion of silica powder to fabricate glass samples, enabling the creation of optical materials unattainable through existing techniques
- Developed embedded firmware and modified the C# GUI of the system to automate stage movement

Cornell University, Ithaca, NY

Teaching Assistant for Introduction to Circuits for Electrical Engineers

August 2025 - December 2025

- Led weekly laboratory sessions, assisting students with circuit design and hands-on use of electrical test equipment, including oscilloscopes, signal generators, DMMs, SMUs, and DC power supplies
- Taught recitation classes, created rubrics, graded exams, and held office hours for 100+ students

Mathnasium at Pittsford-Brighton, Rochester, NY

Math Instructor and Tutor

August 2021 - August 2024

- Provided one-on-one in-person math instruction to students ranging from 1st to 12th grade up to calculus
- Documented learning plans and coordinated session schedules for small groups of students

TECHNICAL PROJECTS

Cornell Electric Vehicle Project Team, Cornell University, Ithaca, NY

Electrical Sub-team Member

November 2024 - Present

- Execute the full PCB design lifecycle, including component selection, schematic and layout in Altium Designer, soldering, firmware development, board bring-up, vehicle integration, and multiple team design reviews
- Designed a custom Joulemeter PCB to measure energy output of the team's custom battery
- Developing a Battery Management System (BMS) PCB that monitors conditions, provides cell balancing, implements state-of-charge estimation, and ensures isolation for the 60V battery
- Collaborate with ~90 members to build a hyper-efficient electric vehicle for the Shell Eco Marathon competition

SOFTWARE AND PROGRAMMING SKILLS

MATLAB, Python, C, C++, Java, C#, Verilog, Altium Designer, LTspice, Git, Microsoft 365 Suite

HARDWARE AND INSTRUMENTATION SKILLS

Microcontrollers, Soldering, Oscilloscopes, DMMs, DC Supplies, PCB Bring-up

Interests: Alpine skiing, Biking, Tennis, Hiking, Piano, Sci-fi movies