

# Om Anavekar

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## EDUCATION

### Carnegie Mellon University

Master of Science: Electrical & Computer Engineering

Pittsburgh, MA  
December 2026

### Rensselaer Polytechnic Institute

Bachelor of Science: Computer & Systems Engineering, Computer Science

GPA: 3.7/4.0, Magna Cum Laude

*Relevant Courses: Computer Hardware Design, Microprocessor Systems, Operating Systems*

Troy, NY  
May 2024

## EXPERIENCE

### Lighting Enabled Systems & Applications

Undergraduate Researcher

Troy, NY  
September 2023 – May 2024

- Led development of PCBA for an advanced Time-of-Flight occupancy sensor, utilizing KiCad for schematic design/layout, and Python for sensor data visualization
- Optimized PCBA size and power efficiency, achieving an 85% size reduction compared to initial prototype
- Facilitated weekly design reviews and collaborated with experts and vendors to evaluate sensor offerings

### Tesla Motors

Intern (Low Voltage Controllers)

Palo Alto, CA  
January 2023 – August 2023

- Designed electronic hardware and software for validation of vehicle body controllers
- Performed bench-level testing of newly developed circuit boards, identifying design issues and suggesting optimizations to maximize performance and reliability
- Programmed automation scripts to streamline testing and validation processes

### Anaveo Labs

Founder

San Ramon, CA  
June 2020 – December 2022

- Created Glo, an open-source addressable LED controller for home/commercial lighting
- Designed and developed circuit and embedded software, managing end-to-end product development through multiple iterations to ensure reliability and scalability
- Launched Glo via Kickstarter, receiving 374% of initial funding goal and shipping over 250 units globally

## PROJECTS

### Vehicle Adaptive Lane Assist System

June 2024 – Present

- Developing hardware components and software algorithms to retrofit a sedan with lane-aware cruise control, adding advanced driving features to a vehicle with no built-in ADAS capabilities
- Modeled complete system layout, including circuit board design, 3D CAD modeling for sensors and onboard computers, and software/firmware for processing real-time sensor data using Python and C++
- Applied computer vision solutions with OpenCV to analyze lane data at 30 FPS on a Raspberry Pi Zero

### Aircraft Robotic Assembly Robot - RPI Capstone Project (Team of 6)

January 2024 – May 2024

- Engineered a prototype robotic platform to assist assembly workers with lifting and positioning cable harnesses into aircraft, using Robot Operating System (ROS2) as a software framework
- Programmed omnidirectional operation of robot, employing a PID algorithm for closed-loop speed control
- Redesigned drive train electronics for modularity, ease of use, and to accommodate other subsystems
- Awarded a design accolade for outstanding individual contribution to overall project development

## SKILLS

**Programming Languages:** C, C++, Python, SystemVerilog, Dart

**Frameworks and Tools:** Linux, Robot Operating System (ROS2), Qt, Flutter, OpenCV, Git, SVN

**Electronics Design:** Schematic Capture/PCB Design, KiCad, Altium, LTspice

**Hardware:** Lab Equipment (Oscilloscope, DMM, E-load), Embedded Systems (STM32, ESP32, ATmega)