

# Adi Ramachandran

ECE Major @ Olin College, '23 | [adinocap.com](http://adinocap.com)

## EDUCATION

### Olin College of Engineering, May ('23)

Bachelor of Science, Electrical and Computer Engineering (ECE)

**Relevant courses** – *Software Design, Computer Architecture, Microelectronic Circuits, Computational Intro to Robotics, Quantitative Engineering Analysis, Modeling and Simulation of the Physical World*

## EXPERIENCE

### Olin Electric Motorsports (Formula SAE) – Electrical & Firmware Engineer

Telemetry Subteam | Cockpit Subteam | November 2019 - Present

- Writing firmware in **C** and building a data pipeline with **Redis & Docker** to implement wireless vehicle telemetry system. Allows team to stream, log, & visualize sensor data from vehicle CAN bus in real time.
- Configured and tested **custom battery pack** and designed battery management **PCB in KiCad** for vehicle low voltage electrical system. PCB enables overcharging prevention & active cell balancing.

### Acoustic Wells – Electrical Engineering Intern

IoT Hardware Team | June 2020 - August 2020

- Designed IoT sensing and datalogging **PCB's in Eagle**, currently deployed to oil fields in Utah & Texas.
- Simulated circuitry in **LTSpice**. Specified, designed, tested & debugged multiple PCB revisions.
- Wrote firmware for boards in **C** to log data & communicate over Bluetooth and cellular connections.

### PROMINENT Research Lab, University of Illinois Chicago – Data Science Researcher

June 2019 - August 2019

- Used **Java and Python** to build novel machine learning pipeline for time series data classification.

## PROJECTS / VENTURES – see more & images on [adinocap.com](http://adinocap.com)

### Micromouse Challenge – Autonomous maze solving differential drive robot!

Implemented low-level robot controller, [adaptive maze solving algorithm](#), & pathfinding with ROS & Python!

### Robot Localization – Estimating robot position within known map with particle filter

Used **Python & ROS** to implement [custom particle filter algorithm](#) to probabilistically determine bot position.

### Corewars – Algorithmic & critical thinking collaborative game software [deployed]!

Reimagined, developed (in React.js), and [deployed Corewars in an Indian university](#) as a teaching tool!

## SKILLS

**Software** – Python, C, C++, ROS, Matlab

**Simulation & HDL's** – LTSpice, Verilog

**PCB Design** – Eagle, KiCad

**Web Development** – React.js, Node.js, Redux

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