

# Kilan Rougeot

Needham, MA 02492 | (445) 942-6585 | kilanrou@gmail.com | kilanrou.com

## EDUCATION

### Olin College of Engineering

Bachelor of Science in Mechanical Engineering

Relevant Coursework: Mechanics of Solids, Thermodynamics, Quantitative Engineering Analysis, Sensors and Controls

Needham, MA

Aug 2024 - Jun 2028

## EXPERIENCE

### Mechanical Engineering Intern

Hyundai (Kia) – EMEA Automotive Manufacturing Plant

Žilina, Slovakia

May 2025 - Jul 2025

- Developed a fully automated robotic tire loading system, improving safety and eliminating the need for three manual operators.
- Installed and configured Keyence safety sensors and vision systems for automated engine valve spring alignment using 3D scanning.
- Worked across Press, Body, Paint, Assembly, and Engine departments; gained experience with robotic arms and PLC systems.

### Data and Computer Science Analyst

Astara – Global Mobility Provider

Madrid, Spain

Jun 2023 – Jul 2023

- Developed Python scripts to extract meaningful insights for the business and automated their system, reducing weekly report preparation time by over 90%.
- Automated systems using data extraction and created a web scraping tool to track the prices of over 1000 competitors.

### Robotics Engineering Intern

AT Dev Inc. – Biomechanics Startup

Los Angeles, CA

Jun 2022 – Jul 2022

- Developed and prototyped assistive technology for individuals with physical disabilities and post-surgical rehabilitation needs.
- Designed, machined, and tested a custom-fit leg brace using SolidWorks, CNC mills, and 3D scanning technology.
- Created a first-of-its-kind fastening mechanism and gained exposure to early-stage startup operations.

## PROJECT TEAMS & COMPETITIONS

### Mechanical Engineering Team Member

RoboLabs – Farm Robotics Challenge

Needham, MA

2025 – Present

- Designed and fabricated a soil-interaction mechanism for an autonomous agricultural drone, completing 13 design iterations.
- Developed a patent-pending lead screw deployment system integrating embedded soil moisture sensors for in-ground measurement.

### Chassis Lead and Team Member

Baja SAE – Olin College of Engineering

Needham, MA

2024 – Present

- Designed and fabricated a competition vehicle chassis using SolidWorks and FEA-driven structural optimization.
- Performed CNC machining, TIG welding, and firewall design under competition rules.

### Team Captain, Lead Builder, and Operator

FIRST Robotics Competition – Team 1391 (The Metal Moose)

West Chester, PA

2021 – 2024

- Led robot design, manufacturing, and system integration using CNC machining, CAD, 3D printing, and manual fabrication.
- Qualified and competed at the World Championship all three years; ranked in the top 3% globally.
- Earned multiple engineering and autonomous awards; District Championship Finalist and Competition Winner.

## PROJECTS

### Autonomous Assistive Feeding Device

2024 - 2025

- Designed and built a patent-pending autonomous feeding device integrating mechanical actuation, sensing, and control.
- Engineered the mechanical system and architecture to enable reliable automated feeding; project website: [kilan777.github.io/pie](https://kilan777.github.io/pie)

### Manufactured a Motorized Beach Wheelchair

2023 - 2024

- Built a motorized wheelchair to improve accessibility and mobility for people with disabilities, sponsored by the Avalon Beach Patrol.

### Developed and Coded a Working Prosthetic Hand

2022 - 2023

- Designed and coded the working prosthetic hand using Onshape, Arduino, 3D printers, Drills, Soldering, and ECG sensors.

### Built an Autonomous Snow Removal Robot

2021 - 2023

- Developed an autonomous snow removal robot using CNC fabrication, embedded electronics, and Java-based control.

## SKILLS

**Mechanical & Manufacturing:** CNC milling & routing, lathe, TIG welding, fabrication, prototyping

**Software & Controls:** SolidWorks, Onshape, Fusion 360, Ansys, MATLAB, Java, Python, C++, PLC programming

**Languages & Certifications:** English, French, Spanish | PADI Dive Master & Rescue Diver