

# Kandhan Nadarajah

734-276-5277 | kandhan.nadarajah@gmail.com | linkedin.com/in/kandhannadarajah | Canton, MI | U.S. Citizen

## EDUCATION

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**GEORGIA INSTITUTE OF TECHNOLOGY, College of Engineering – Atlanta, Georgia** *Current GPA: 4.0/4.0*

**Candidate for Bachelor of Science in Mechanical Engineering, Minor in Computing and Intelligence** *May 2025*

Relevant Coursework: Thermodynamics, Fluid Dynamics, System Dynamics, Engineering Graphics and Design, Statics, Deformable Bodies, Creative Decisions and Design, Data Structures and Algorithms, Circuits and Electronics

## EXPERIENCE

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**May Mobility – Ann Arbor, Michigan**

*May 2022 – Dec 2022*

*Mechanical Engineering Intern - OVTLs Lead for Autonomous Vehicle*

- Led the design, testing, and early production of the On Vehicle Traffic Light Sensor (OVTLs) assembly for two models of autonomous vehicles
- Reduced manufacturing cost of OVTLs to ~\$4 by using sheet metal design, vacuum forming, and injection molding
- Collaborated with cross-functional teams, embedded software, electrical and product release to verify and validate OVTLs for production of 100+ vehicles
- Conducted Finite Element Analysis on commonized side sensor module, optimizing BOM and reducing unit cost by 25%
- Performed GD&T on assembly and improved technical drawings based on feedback from team members and suppliers
- Carried out numerous field tests using 3D printed rapid prototypes to validate requirements

**Wreck Racing – Atlanta, Georgia**

*Aug 2021 – Present*

*Lead Engineer / Powertrain Lead*

- Lead Engineer and Powertrain Lead for a multidisciplinary team of 80 engineers who design and build a racecar for the Grassroots Motorsports \$2000 Challenge achieving a second place finish
- Implemented a sprint-based project cadence using Trello to knock weeks off our build timeline.
- Work under tight parts availability, and time and budgetary constraints to create fully custom components for a variety of subsystems using on-site machining and fabrication facilities
- Wired standalone ECU and used tuner studio to adjust volumetric efficiency, ignition, and AFR tables
- Improved the vehicle based on road testing data including potentiometer, gyroscope, and accelerometer data
- Coordinate all engineering meetings creating and understanding both customer and engineering requirements

**Adaptive Energy – Saline, Michigan**

*Apr 2020 – Aug 2020*

*Face Shield Manufacturer*

- Manufactured tens of thousands of face shields for people in need during the beginning of the pandemic
- Collaborated with a selective team to streamline processes and increased mask production by 50%

## PROJECTS

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**Creative Decisions and Design**

*Aug 2022 – December 2022*

- Competed in a team-based robotics competition designing a robot to complete predetermined tasks in a set time frame
- Designed components in SolidWorks and participated in collaborative design reviews
- Evaluated multiple manufacturing processes including laser cutting and 3D printing
- Wrote control sequence using arduino board and C based programming to manipulate mechanical system
- Wrote in depth design reports discussing decision and functions
- Developed design of robot using house of quality, morphological charts, and function trees

**Automotive Flow Bench**

*September 2023 – Present*

- Utilized a mass air flow sensor, manifold absolute pressure sensor, electronic throttle body and household vacuum to create system that can maintain vacuum and measure accurate mass air flow through objects
- Used Solidworks to design housing assembly and Arduino board to read sensors and control the system

**CNC Plasma Tube Cutter**

*June 2022 – Present*

- Configured 2 Nema stepper motors with an Arduino board and CNC shield to create drivers for 2 axis of motion
- Designed code to allow rotational and longitudinal axis to collaborate and create precise system for the plasma torch
- Designed CAD model in Fusion 360 and currently working towards prototype fabrication and testing
- Considering viability of product and potential for Create-X startup

## ADDITIONAL

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**Software Capabilities:** Java, MATLAB, Fusion 360, Inventor, Solidworks, C, Arduino, Assembly, Excel, AutoCad

**Technical Skills:** GTAW, GMAW, HAAS, GD&T, Design for Manufacture, Rapid Prototyping, FEA, Product Design

**Awards:** 3<sup>rd</sup> at SkillsUSA State Welding Competition, HFM Scholarship Winner, Pfizer Scholarship Winner, National Merit Scholar