

Contact

ldsantos@umich.edu

www.linkedin.com/in/leonardodsantos (LinkedIn)

Top Skills

Siemens NX

Finite Element Analysis (FEA)

AutoCAD

Leonardo Santos

Mechanical Engineering Student at the University of Michigan - Ann Arbor
United States

Experience

Michigan Baja Racing

Suspension Subsystem Lead

September 2018 - Present (2 years)

Ann Arbor

- 2020-2021 Suspension Subsystem Lead: Explore different material opportunities to reduce weight of links while keeping structural integrity by performing finite element analysis and on-site track testing.
- 2019-2020 Driver Controls Lead: Researched and developed an innovative brake bias system to allow the driver to adjust brake bias via an adjuster knob. Designed parts with component packaging in mind due to extreme toe box constraint challenges brought by extensive rules changes.
- Experience with CNC / manual mill and lathe, and TIG welding.

U of M 3D Printing Club

Vice President

September 2018 - Present (2 years)

Ann Arbor, Michigan

- Lead all club meetings and events and serve as the face of the club to sponsors.
- Interact directly with members of the club by showing them the 3D printer server network and facilitate printer upgrades in order to print filaments such as PLA, Nylon, and PETT.
- Providing CAD workshops and assistance to club members during semester competitions
- Explore different applications of additive manufacturing such as continuous polymerization printers that use 2 wavelengths of UV to harden resin to shape.

Raptee Energy Inc.

Vehicle Dynamics Intern

April 2020 - July 2020 (4 months)

- Simulated electric motorcycle prototype in MSC Adams Car with variable terrain environments

- Used an interactive simulation process producing changes in suspension points and spring constants to find the best combination for rider comfort.
- Created innovative motorcycle stability control algorithms that take advantage of inboard IMU sensor data
- Collaborated weekly with a Simulink intern to confirm findings were accurate in both 3D and mathematical models

Lay Walter E. Auto Lab

Research Assistant

September 2017 - April 2018 (8 months)

University of Michigan

- Water and a flat external EGR were used to provide charge cooling and dilution of air in engine cylinders to decrease knock.
- Processed EGR results using MATLAB scripts to evaluate the potential of water injection for knock suppression
- Used a cDAQ with signals from a digital output module along with a sample LabView file to control the injector.

HBR Industrial Equipment Holding Brasil

Full Time Engineering Intern

June 2016 - July 2016 (2 months)

São Paulo Area, Brazil

- Assisted the lead engineer in 3D modeling fixtures and nitrogen generator assemblies using AutoCAD
- Executed small projects at their lab, assisted the team to build prototypes of electrical circuits
- Created part drawings, piping and instrument diagrams, and data sheets.
- Visited two large industrial customers to learn about their application of industrial equipment and production process.

Education

University of Michigan

Mechanical Engineering · (2017 - 2021)

Rancho Bernardo High School

Diploma · (2013 - 2017)