Leonardo Galoso

Cedar Falls, IA 50613 • (563) 676-3746 • leonardogaloso@gmail.com • leogaloso.com

PROFESSIONAL EXPERIENCE

Thermal Engineer - John Deere Electronic Solutions, Remote
John Deere Corporation **February 2023 - Present**
- Conducted heat transfer and fluid mechanics analysis on power electronics components
- Utilized generative design to reduce pressure drop by 33% in a power inverter while maintaining thermal performance
- Simplified cooling geometry, reduced pressure drop by 50% in a DC-DC converter while meeting thermal constraints

Product Design Engineer - Large Tractor Operator Station, Waterloo, IA
John Deere Corporation **June 2022 - February 2023**
- Designed and prototyped a new rear weldment design to accommodate self-driving hardware on 9R series tractors
- Created an aftermarket plastic cupholder, utilizing a concentric rib design, to improve customer satisfaction towards 8R series tractors
- Designed, prototyped, and implemented a sheet metal immobilizer bracket for engine controllers

Undergraduate Research Assistant, Champaign, IL
Human Factors & Aging Laboratory, University of Illinois at Urbana-Champaign **January 2019 - January 2022**
- Designed and 3D printed (FDM) an end-effector for use with a domestic robot. Developed and utilized a hierarchical task analysis in the testing of autonomous and human-controlled capabilities

Product Development Engineer Intern, Muscatine, IA
The HON Company/HNI Corporation **August 2017 - August 2018**
- Provided design feedback on seating products and conducted reliability analysis on credenza locking components
- Assembled and updated double-sided locking mechanisms and drawers for over 40 metal and laminate front credenzas in Creo; updated pre-existing drawings and bills of materials for production and manufacture

PROJECTS

“Li-ion Battery Powered E-Paper Smart Art Frame” **July 2023 - Present**
- Designed a smart art frame featuring an e-paper display, driver board, and a li-ion battery
- Engineered frame with plastic injection molding design principles and for integration with I/O, display, and battery
- Utilized topology and shape optimization to reduce weight and improve reliability

ME-270: Design for Manufacturability Project
“Alexa Enabled Smart Lamp” **August 2019 - December 2019**
- Conceptualized a design for a smart lamp that integrates with devices via Amazon Alexa
- Generated detailed cost reports: manufacturing times, variable costs, piece part costs, fully burdened costs, etc.
- Created a 2k factorial design of experiment to test factors in wake-up ability
- 3D printed (FDM), programmed, and assembled product

SAE Formula Electric
“Carbon Fiber Wheel with Textured Grip” **August 2019 - December 2019**
- Researched materials, comparing 6061 T6 aluminum and a carbon fiber-reinforced polymer
- Utilized stress analysis (FEA) in Solidworks Simulate to determine factor of safety and optimize reinforcement

EDUCATION

University of Illinois at Urbana-Champaign, Urbana-Champaign, IL **August 2018 - May 2022**
Bachelor of Science (B.S.), **Mechanical Engineering**
- GPA - 3.30/4.00
  Relevant Coursework: ME-270: Design for Manufacturability, ME-310: Fluid Mechanics, ME-371: Mechanical Design II, ME-320: Heat Transfer, SE-402: Product Design & Engineering, ME-471: Finite Element Analysis

SKILLS

CAD
PTC Creo, Windchill; Solidworks; Ansys Mechanical, Fluent, Icepak; Autodesk Inventor, Fusion 360

Programming
Java, R, Python, MATLAB, C#, Simulink, ROS