Leonardo Galoso

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PROFESSIONAL EXPERIENCE

Product Design Engineer Intern - Remanufacturing, Springfield, MO
John Deere Corporation   **June 2021 - August 2021**
- Developed a neural network on Roboflow to deploy on desktop and mobile devices to automate part identification on the factory floor

Undergraduate Research Assistant, Champaign, IL
Human Factors & Aging Laboratory, University of Illinois at Urbana-Champaign   **January 2019 - Present**
- 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**
- Facilitated in the expansion of the 10500 Series, drafting eight new worksurfaces in PTC Creo
- 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"   **August 2021 - Present**
- Designed and fabricated 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
- Conducted drop/shock test simulations (FEA) and utilized topology and shape optimization to reduce weight and improve reliability
- Analyzed simulated heat transfer effects of a battery on internal components and housing
- Created lo-fi prototypes and 3D printed models to validate design iterations

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
- Conducted assembly time and consolidation analysis
- 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
- Full manufacturing report can be viewed here: https://portfoliogaloso.squarespace.com/portfolio/smart-lamp

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
- Modeled designs in Solidworks. 3D printed grips, working iteratively with stakeholders to prototype and determine ergonomics
- Report can be viewed here: https://portfoliogaloso.squarespace.com/portfolio/steering-wheel

EDUCATION

University of Illinois at Urbana-Champaign, Urbana-Champaign, IL   **August 2018 - May 2022**
Bachelor of Science (B.S.), **Mechanical Engineering**
- GPA - 3.44/4.00
  Relevant Coursework: ME-270: Design for Manufacturability, ME-446: Robot Dynamics and Control, ME-371: Mechanical Design II, ME-370: Mechanical Design, SE-402: Product Design & Engineering, ME-471: Finite Element Analysis

SKILLS

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

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