Mark E. Luke

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OBJECTIVE

Obtain a mechanical engineering full time position in the area of design or research and development after May 2019 incorporating engineering and design skills gained through coursework and internships.

EDUCATION

August 2014 – May 2019

The Ohio State University **GPA: 3.72 (4.00 scale)**

- B.S. Mechanical Engineering | Nuclear Engineering Minor

ENGINEERING WORK EXPERIENCE

Fluor-BWXT – Systems Engineering Intern **May 2018 – August 2018**

Nuclear Science and Engineering **Piketon, Ohio**

- Designed modification to existing steam plant piping to reroute steam traps and chemical feed point
- Analyzed broken butterfly valve and control system; pitched several solutions with recommendation of new valve and control system
- Designed upgrade to HVAC system in process building, calculating BTU load to size system

Mubea – Product Development Co-op **May 2017 – August 2017**

Stabilizer Bars **Florence, Kentucky**

- Reduced inventory time from one week to under one day by building an excel sheet to organize and streamline product development inventory
- Initiated data collection of development production logs for use in GANTT chart

PROJECT EXPERIENCE

OSU JetCat – Experimental Lead **September 2018 – May 2019**

- Tasked with characterizing the dynamic response of mini turbojet engine with team of five
- Brainstormed and designed adapter piece to mount engine to thrust stand
- Performed bolting analysis calculations with MATLAB to ensure safety of thrust stand
- Presented design process with team through problem definition report, preliminary and critical design reviews

CAD Chillout Desktop Fan **October 2018 – December 2018**

- Reverse engineered desktop fan to model in SOLIDWORKS with team of four
- Modelled four injection molded internal structural pieces with complex geometries
- Simulated outer fan casing using SOLIDWORKS Drop Test for stress analysis
- Created GD&T drawing and presented project to class

MagLev Train Controller Design **February 2018 – April 2018**

- Developed equations of motions for a simple MagLev electromagnetic system
- Simulated dynamic system using Simulink
- Utilized MATLAB tools to design PID controller to stabilize system with given step response constraints

COMPUTER AND TECHNICAL SKILLS

- MATLAB, Simulink, C, C++, LabVIEW, Excel VBA, HTML, CSS
- Certified SOLIDWORKS Associate, GD&T, CNC Machining
- Coursework: Computer Aided Design and Manufacturing, Fluid Mechanics, Design and Control of Mechatronic Systems, Measurements, Heat Transfer, Machine Elements, Manufacturing Engineering

HONORS AND ACTIVITIES

SIMCenter Intern **August 2017 – January 2018**

- Performed acoustic research using MATLAB creating portion of code that increased versatility of modeling capabilities

Teaching Assistant – Computer Aided Design and Manufacturing **January 2019 – May 2019**

- Led open labs to teach students to use Tormach CNC mills and assisted with student questions