

Katherine Elizabeth Kemp

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Education

University of Maryland

B.S. Mechanical Engineering (GPA 3.98)

- Minor, Innovation & Entrepreneurship, R. H. Smith School of Business
- Tau Beta Pi Engineering Honor Society
- Banneker/Key Scholarship

College Park, MD

Expected May 2022

University Carlos III of Madrid

Mechanical Engineering

Leganés, Spain

January 2020-June 2020

Software Skills

Arduino, Autodesk Inventor, Circuit Lab, Creo, C++, Excel, Java, MATLAB, Python, Revit, SolidWorks, Tinker CAD, 3D Printing

Work Experience

MPR Associates, Inc.

Co op Engineer

Alexandria, VA

August 2020-Present

- Write a Python script to allow for faster and more extensive data analysis of simulated nuclear accident scenarios
- Design and 3D print SolidWorks parts for testing before manufacturing
- Check technical drawings, tolerance analyses, and calculations for validity in compliance with formal QA requirements
- Communicate with senior engineers to understand project requirements, scope, and timeline

Integral Group

Mechanical Engineering Intern

Washington, DC

June 2019-August 2019

- Performed HVAC load calculations using TRACE 700 software to model building conditions
- Designed ductwork and riser diagrams in Revit and used a ductulator to determine proper duct sizes
- Created and updated equipment schedules in Revit with relevant data and product specifications
- Reviewed submittals for compliance with contract documents and documented inconsistencies

Strosnider's Hardware

Sales Associate

Silver Spring, MD

May 2018-January 2019

- Assisted customers by finding materials for projects and fasteners to fix broken hardware, by answering store phone calls and pages, and by cutting keys, glass, wood, rope, chain, and blinds
- Organized, straightened, priced, and stocked merchandise to maintain accurate and engaging displays

Project Experience

Gemstone Honors College-Team FORMULA

Team Liaison

College Park, MD

April 2018-Present

- The goal of this project will be to test wireless charging capability of electric vehicles while in operation
- Manipulate existing MATLAB tools to simulate an AC magnetic field via motion through a non-uniform DC field
- Design a test rig to determine the correlation between simulations and physical implementation

Remote Controllable BRIO Maze Labyrinth Game

Project Manager

College Park, MD

November 2019-December 2019

- Installed hobby linkages, high-torque servo motors, an Arduino Uno, and an ADXL345 accelerometer on an existing BRIO board game to allow the game to be played via a wired handheld controller
- Implemented a live 3D rendering of the gameboard orientation using Processing software

Activities

R. H. Smith School of Business

Student Ambassador

College Park, MD

September 2019-Present

- Promote the Smith Minors to prospective students by speaking about my experiences at campus events
- Interview community members and post on social media about benefits of the minor

Celtic Grace Irish Dance Troupe

President

College Park, MD

September 2017-Present

- Obtain student government recognition each year in order to utilize university resources
- Prepare budgets according to university policies and submit for approval to secure funding

R. H. Smith School of Business

Teaching Assistant

College Park, MD

August 2019-December 2019

- Provided advice and guidance to teams of students working on successfully operating a business by helping solve problems among group members and encouraging creative use of resources
- Graded assignments related to entrepreneurial thinking concepts such as the business model canvas