

Katherine Kemp

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EDUCATION

UNIVERSITY OF MARYLAND

BS IN MECHANICAL ENGINEERING

May 2022 | College Park, MD

BS IN COMPUTER SCIENCE

May 2022 | College Park, MD

Minor in Innovation and Entrepreneurship

Gemstone Honors College

Banneker/Key Scholar

Dean's List

GPA: 3.98 / 4.0

UNIVERSIDAD CARLOS III

Jan - Jun 2020 | Leganés, Spain

LINKS

Personal:// katherinekemp.com

LinkedIn:// [katherineekemp](https://www.linkedin.com/in/katherineekemp)

GitHub:// [katherinekemp](https://github.com/katherinekemp)

SKILLS

LANGUAGES

Java • Python • MATLAB • C/C++

Arduino • \LaTeX • Ruby • OCaml

Rust • PLC Ladder Diagram

and Sequential Flow Chart

SOFTWARE

Excel • Ultimaker Cura • SolidWorks

COURSEWORK

Mechatronics

Remote Sensing

Object-Oriented Programming

Discrete Structures and Mathematics

Algorithms

LEADERSHIP

Celtic Grace Irish Dance Troupe President

Smith Minors Ambassador

Electronics and Instrumentation TA

Entrepreneurship TA

AP Physics and Calculus Tutor

ACTIVITIES

Tau Beta Pi Engineering Honor Society

Pi Tau Sigma Mechanical Engineering

Honor Society

Kappa Theta Pi Professional Fraternity

FLEXUS: Women in Engineering Living

and Learning Program

WORK EXPERIENCE

MPR ASSOCIATES | CO-OP ENGINEER

Aug 2020 - Jan 2021 | Alexandria, VA

- Automated data analysis of simulated nuclear accident scenarios using Python
- Implemented custom setting selection on Python GUI using Tkinter Toplevel widget
- Automated verification and validation procedures for thermal hydraulics code with end to end tests using Pytest
- Ported thermal hydraulics modeling application from Python 2.7 to Python 3
- Conducted rigorous search of industry data to determine failure rate of industrial equipment for a reliability analysis of submarine testing processes
- Designed and 3D printed SolidWorks parts for testing before manufacturing
- Checked technical drawings, tolerance analyses, and calculations for validity in compliance with formal QA requirements

INTEGRAL GROUP | MECHANICAL ENGINEERING INTERN

Jun 2019 - Aug 2019 | Washington, DC

- Calculated HVAC loads using TRACE 700 software to model building conditions
- Designed ductwork and riser diagrams in Revit
- Utilized a ductulator to determine proper duct sizes
- Prepared and maintained equipment schedules in Revit with relevant data and product specifications
- Reviewed submittals and documented inconsistencies

STROSNIDER'S HARDWARE | SALES ASSOCIATE

May 2018 - Jan 2019 | Silver Spring, MD

- Assisted customers in completing projects by finding materials and fasteners
- Cut keys, glass, wood, rope, chain, and blinds
- Organized, priced, and stocked merchandise to maintain engaging displays

PROJECTS

TEAM FORMULA

Aug 2017 - Present | College Park, MD

- 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
- Collaborate with a team of 12 to test wireless charging capability of electric vehicles while in operation

REMOTE CONTROLLABLE BRIO MAZE LABYRINTH GAME

Nov 2019 - Dec 2019 | College Park, MD

- 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 game board orientation using Processing 3 software