

# Gerald Mace



📞 240-682-5569

✉️ GeraldMace13@gmail.com

📍 Waldorf, MD

## OBJECTIVE

Mechanical Engineer with 2 years experience in a professional design environment seeking a position more attuned to my skills and interests where I can grow and develop my career.

## EDUCATION

**University of Maryland, College Park**

BS, Mechanical Engineering

January 2018- June 2019

College Park, MD

**College of Southern Maryland**

ASE, Engineering

May 2015- December 2016

La Plata, MD

## WORK EXPERIENCE

**University of Maryland Mechanical Engineering Department**

Undergraduate Researcher

March 2018- June 2019

College Park, MD

- Proposed and presented a 24-page research plan to design and develop a small and portable wind tunnel device for undergraduate research and testing.
- Conducted 2 initial tests of power efficiency and air turbulence and created a mathematical model to represent the tunnels initial and predicted performance.
- Calculated the required power to produce speeds between 4 to 10 meters per second, and researched the components required to meet the designated goals set by my research sponsors.
- Assembled a closed loop control system which operated a brushless motor that would vary in power consumption based on the difference in air pressure the tunnel would produce.
- Actuated the motor based on sensed changes in RPM and pressure and produced accurate velocity profiles within 0.1 meters per second of the user's desired speed.
- Displayed valuable information to a user with the Arduino IDE by converting the raw bit information into values of pressure, velocity, and power consumption.

**Dewberry Engineers Inc.**

Engineer / Permit Coordinator

October 2017- Present

Lanham, MD

- Draft water and sewer plans for 150+ lot subdivisions. Plans can have 2-6 phases and involve coordination with 3-4 other Engineering teams.
- Simultaneously work on 3-4 projects to get them permitted and constructed through daily plan design, communication, coordination, and research for better engineering practices.
- Correspond with PG County government agencies in delivering and acquiring plans or permits for my coworkers, project managers, and clients.
- Work daily with AutoCAD equipped with 2 other design toolkits (C3D and Carlson) based on the current project demands and requirements.

## SKILLS

### Product Development Process

- Feasibility Testing and Analysis
- 3D Printing for Prototyping and Functional use.
- DFM Practices
- Safe and Proper machine shop practices

### Mechatronics and Coding

- Circuit Design and Analysis
- Electromechanical Actuation
- Converting raw data and code into readable information
- Matlab data sampling
- Arduino and Processing IDEs

### CAD Packages

- SolidWorks
- Autodesk Inventor
- AutoCAD (Civil 3D and Carlson)
- Also familiar with Creo and SketchUp

### Plan Drafting

- Follow proper Company and Government standards
- Familiar with GD&T definitions and usage
- Draft neat and easy to understand plans and schematics

### Professional Etiquette and Experience

- Polite and accommodating to clients and government parties
- Quick to address Client queries and requests
- Communicate well with fellow engineers