



# Callie Mataczynski

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## EDUCATION

**Bachelor of Science** | Biomedical Engineering/Minor in Global Health    12/2020  
**University of Wisconsin-Madison, Madison, WI**

**Academic Study Abroad:** Hangzhou, China (05/17-08/17)

- Coursework Included Mechanics of Materials, Technical Communications and Mandarin Chinese at Zhejiang University.
- Improved cross-cultural communication skills and engineering perspectives.

## SKILLS

**Computer skills;** SolidWorks, MATLAB, **Machining skills;** Advanced in CNC, drill  
Distributed Control Systems (DCS), Pi    press, mill, lathe, and hand tools.  
Vision, Python and Arduino IDE    Proficient in wood shop and welding.

## RESEARCH

***Pedal Elevated Temp Risk Assessment (PETRA) Project (05/21-CURRENT)***

- Preventing diabetic foot ulcers in low resource settings using Pedal Elevated Temperature Risk Assessment (PETRA) throughout India.
- Coded an app used in field for patient data collection and AI analysis.
- Learned about organizing research and data collection on a large scale.
- Learned to improve compliance of patients/RN's based on their culture.

**Vascular Tissues and Biomechanics Lab (12/17-05/2018)**

- Computationally modeled the CV system using electrical analogs and large systems of equations and data in MATLAB.
- Presented findings on poster "*Computational Investigation of Right Ventricular Function*" at UW Madison undergraduate symposium.

***Cloning of roMRX1-roGFP2 for diagnostic TB techniques (05/17-08/17)***

- Explored the mechanisms involved in TB by cloning roMRX1-roGFP2.
- Developed a strong research background in a highly ordered Indian lab.

## DESIGN PROJECTS

***Tandem Bike for Individual with Autism (09/19-05/20)***

- Built a tandem electric bike for an autistic man and his caretaker.
- Team lead; developed cross-functional communication/organization skills.
- Project made such an impact it was published in multiple news sources.

***Tumor Measuring Device for Oncologists (01/18-06/18)***

- Built a medical device to measure mice tumors using skills in CAD, 3D printing, control systems, and coding.

***Tennis Playing Arm for Individual with Muscular Dystrophy (09/17-12/17)***

- Collected and analyzed data from a wheelchair bound tennis player.
- Fabricated prototypes and iterated designs based on client's needs.

## WORK HISTORY

### **Hemodynamic and Tonometry Device (09/2016-12/2016)**

- Mapped a system of impedance/tonometry equipment and created a reutilization plan for future stakeholders.
- Learned how to understand complex machinery and systematically connect them to form an end product that could be used by the client.

### **API PROCESS ENGINEER**

*10/2022 to CURRENT*

#### **Bayer Healthcare Ext. Michael Schwemberger Co. | Berkeley, CA**

- Conduct root cause analysis to identify and eliminate process losses.
- Analyze critical line data to make recommendations for improvement.
- Managed third-party contractors and inspected completed work.
- Create process simulations to test operational outcomes (see website).
- Consistently understand novel detailed processes as well as connect big picture thinking to reduce downtime and increase production capacity.
- Provide technical assistance to production team when issues arise.

### **CULTURAL ORIENTATION DIRECTOR**

*05/2022 to 09/2022*

#### **Ethiopian Council of Community Development (ECCD) | Wausau, WI**

- Created and taught a class on Cultural Orientation for Afghan refugees.
- Became a better leader, teacher, and peacemaker within my hometown.

### **RESEARCH ASSISTANT**

*05/2017 to 09/2017*

#### **IISC-Center Infectious Disease Research| Bangalore, India**

- Worked collaboratively in a fast-paced, rigorous laboratory environment.
- Attended seminars and symposiums to advance all knowledge and culture.

### **BICYCLE MECHANIC**

*01/2017 to 08/2021*

#### **Revolution Cycles | Madison, WI**

- Serviced, built, and repaired bicycles with focus on quality/efficiency.
- Developed strong interpersonal skills when communicating with customers and potential vendors alongside becoming extremely good at bicycle sales.

### **MECHANICAL ENGINEERING INTERN**

*05/2018 to 08/2018*

#### **Headrush Technologies | Boulder, CO**

- Developed technical skills through working with skilled professionals.
- Designed testing apparatuses and protocols for product components.
- Drafted assemblies, models, and other technical drawings.

### **STUDENT STAFF**

*11/2018 to 05/2019*

#### **UW Madison Student Shop | Madison, WI**

- Trained students how to use equipment/fabricate parts for their design.
- Received permits on mill, lathe, drill press, CNC, welding, and wood shop.