

Saige E Sunier

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Education

Duke University, Pratt School of Engineering – Durham, North Carolina

September 2016 – May 2020

Bachelor of Science in Engineering: Biomedical Engineering

GPA: 3.40

Certificate: Global Development Engineering

Work Experience

Design that Matters (DtM) – Redmond, WA

August 2020 – present

Human Centered Designer

- Collaborated with 20+ Médecins Sans Frontières (MSF) stakeholders stationed in over 8 countries to identify qualitative design requirements for a newborn warmer to be implemented in low resource settings (LRS).
- Developed a rigorous set of technical product requirements and specifications using a Quality Function Deployment method for the newborn warmer that are currently being used in our prototyping phase.
- Wrote evidence-based papers and conducted market studies that proved the need and market for a supplemental newborn warming device designed specifically for LRS to gain support for our project within MSF.
- Responded to Covid-19 by conducting market research to locate local and federal Indian Health Service (IHS) hospitals experiencing PPE shortages. Packaged and shipped over 1,000 NIH approved face shields.
- Working with co-founder and CEO of DtM to fundraise, manage global partnerships, establish local and international networks, plan upcoming field visits and design sprints for the ongoing development of the newborn warmer.

DigiTouch Health (MKM Ventures) – Valhalla, NY

May 2019 – August 2019

Product Research and Development Intern

- Optimized portable blood pressure monitor (TouchBP) performance through mechanical and software development.
- Developed MATLAB software to signal process raw ppg and load cell data collected from TouchBP device.
- Designed and conducted trials to gather data from TouchBP in preparation for IRB clinical trial protocol optimization.
- Drafted neural network algorithm development plans and business strategies with a team of 6 colleagues.

Engineering World Health Summer Institute – Arusha, Tanzania

June 2018 – August 2018

Medical Equipment Technician

- Participated in instructional training focused on troubleshooting and repairing 27 types of medical equipment.
- Conducted medical equipment repairs on 88 devices, enhancing the operational efficiency of Tengeru hospital.
- Designed, constructed, and installed partitions in minor surgical ward, inhibiting the spread of infections and HIV.
- Created and implemented standard operating procedure manuals in English and Swahili to provide instructions on proper use of medical equipment that was donated without operation instruction manuals.

Ken Gall Lab – Duke University, Durham, NC

May 2017 – May 2018

Student Research Assistant

- Aided in the investigation and analysis of the material properties of 3D printable cross-linking thiolene material.
- Handled experiments and data collection for over 500 samples through operation of SEM, MicroStrain Analyzer, and DSC instruments.

Technical Skills

Software Languages: MATLAB, Python, React, HTML, CSS, Arduino (Java/C)

Design Software: Altium PCB Designer, Fusion360 CAD, Adobe Creative Suite

Operating Systems: Mac OS X, Windows

Leadership Experience

Duke Club Ski/Snowboard Team – Durham, NC

August 2016 – May 2020

Treasurer, Member

- Managed all team finances including collection of dues, maintaining financial records, and balancing of budget.
- Competed in Alpine Skiing races from January until February, representing Duke University.

First-Year Advisory Council – Durham, NC

September 2017

Freshman Orientation Leader

- Designed and organized icebreaking and bonding events for Duke first-year students to assist in transition.

Hobbies & Interests

- Skiing, Hiking and Backpacking, Competitive Long-Distance Running, Traveling, Puzzles