Ritvik Jillala

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Education

University of Michigan   **Ann Arbor, MI**
Bachelor of Science in Engineering in Biomedical Engineering and Computer Science   *May 2022*
GPA: 3.90 / 4.00
Coursework: AI in BME, Biomedical Instrumentation Design, Circuits and Systems in BME, Web Systems, Biochemistry, Introduction to Biomechanics

Projects

Cortical Neural Prosthetics Lab – University of Michigan Biomedical Engineering   **Ann Arbor, MI**
Undergraduate Research Assistant   *January 2021 - Current*
- Worked on a machine learning algorithm using MATLAB and Python to determine finger and hand movements for amputees at the forearm
- Performed analysis of EMG signals coming through the forearm to determine decoder latencies
- Built classifier using non-negative matrix factorization and linear discriminant analysis

The Initiative   **Ann Arbor, MI**
Heating Subteam Lead   *September 2020 - Current*
- Designed a thermoregulation system and mattress to regulate neonatal body temperature, using a PID control system, PWM Mosfet, and Arduino Mega
- Integrated w/bassinet consisting of clothing carrier supporting Kangaroo Care between neonate and caretaker
- Motivated 3-5 students to engineer first functional prototype, after years of slow progress

Project RISHI   **Ann Arbor, MI**
Project Research & NGO Search Committee Chair   *September 2019 - Current*
- Initiated and implemented 3-year plan for establishment and maintenance of toilets in Seithur, Tamil Nadu
- Managed 8-9 students to arrange and execute toilet construction project, reduced open defecation
- Facilitated contact and maintained relationships with local non-government organization (Sulabh)

Experience

Blueprints for Pangaea   **Ann Arbor, MI**
Analyst   *September 2020 - Current*
- Formulated and initiated 5-year plan for expansion and establishment of chapters across North America
- Focused on reallocating 100,000 pounds of excess, unused medical supplies to areas of need overseas
- Engaged in shipments with Project CURE accumulating to over $3.3 million to underdeveloped countries

University of Michigan Biomedical Engineering   **Ann Arbor, MI**
Instructional Aide – Circuits and Systems for BME   *December 2020 - Current*
- Led lab instruction, provided ~30 students with an understanding of biomedical instruments and circuits
- Coordinated and promoted remote student (65% of class) inclusion in lab experience during COVID-19
- Assessed student needs and communicated effective strategies to solve problems and understand material

Center for Healthcare Engineering and Patient Safety   **Ann Arbor, MI**
Research Assistant   *December 2020 - Current*
- Developed effective strategies to improve access in the COVID-19 system recovery phase at VA Ann Arbor, decreasing expected wait time by 50%
- Expanded and facilitated implementation of developed strategies to VA healthcare system nationally
- Collaborated on the development of call and night schedules for attending faculty at Michigan Medicine

Skills

Programming Languages: Python, C, C#, C++, Ruby, HTML5, CSS, JavaScript, Ruby, SQL
Programming Applications: Arduino, LabView, MATLAB, Simulink, SolidWorks, Microsoft Office

Activities

VA Ann Arbor Healthcare System, *COVID – 19 Screener*   *October 2020 - Current*

Michigan Izzat, *Logistics Captain*   *September 2019 - Current*