**PREETHI SIVASWAAMY MOHANA**

716-603-1321| psivaswa@buffalo.edu| [www.linkedin.com/in/preethisivaswaamymohana/](https://www.linkedin.com/in/preethisivaswaamymohana/) | [preethisivaswaamy.wixsite.com/preethism](https://preethisivaswaamy.wixsite.com/preethism)

**SUMMARY**

Self-motivated biomedical engineer expertise in design, validation and process engineering as required for medical devices.

**Skills**

***Software:*** MATLAB, Solidworks, LabVIEW, MINITAB, MS Office, JIRA, Confluence, Pspice

***Expert*** in Statistics, Six Sigma, DMAIC, Hypothesis Testing, cGMP, QC tools, Installation Qualification (IQ), Operational Qualification (OQ), Performance Qualification (PQ), Voice of Customer (VOC), QSR, CFR, ISO regulations

**Professional Experience**

|  |
| --- |
| *PROJECT MANAGER, University at Buffalo* － Buffalo, NY **Jan 2020 - May 2020*** Managed and lead R&D undergraduate research and development team of eight students for five months.
* Integrated **VOC** from patients into design from the product design phase through to complete product lifecycle.
* Developed **3D printed** pre-prosthetic forearm and hand using **Fused Deposition Modelling (FDM)** in CURA.
* Constructed CAD design file in Solidworks by applying knowledge of biomechanics and human physiology.
* Employed knowledge of **ISO 13485, ISO 14971, 21 CFR 820.30** – defined and documented design inputs.
* Reduced design cost of final 3D printed prosthetic by **30%** - hollowing material and reducing number of support structures.
* Conducted status meetings, developed project reports, strategies, budgets and improved process development plans.

  |
| ***CONTENT TEAM INTERN, MEDINDIA Health Network*** － Chennai, India **Jan 2018 – Apr 2018*** Evaluated software system requirements, design, development, documentation, integration, test, verification and validation.
* Revamped product solutions in a front-end and back end features and launched 20+ online health calculators.
* Followed QA procedures to assure that project meets customer expectations and regulatory requirements.
 |
| ***R&D INTERN, STAAN Biomed Engineering Pvt Ltd－*** Coimbatore, India  **May 2017 – Jun 2017*** Engineered designs in **FDA Quality System and ISO 13485** regulated medical device development start-up environment.
* Reviewed **Standard Operating Procedures (SOPs)** to evaluate performance metrics of medical device- tourniquet.
* Executed **Validations, Design of Experiment (DOE), Failure Mode Effects Analysis (FMEA)** on medical devices.
 |

**RESEARCH EXPERIENCE**

|  |
| --- |
| *RESEARCH ASSISTANT, University at Buffalo* － Buffalo, NY **Nov 2018 - May 2020*****THESIS:*** *MUSCLE FATIGUE ANALYSIS USING EMG OBTAINED FROM IoT BASED NEUROREHABILITATION DEVICE** Innovated IoT based tele-rehabilitation device and acquired EMG by conducting human experiments for 6 months.
* Applied **signal processing**- filtering, rectification, normalization, power spectrum, spectrogram, RMS on EMG.
* Analyzed EMG in **MATLAB** to measure muscle fatigue from dataset of 180 recorded EMG files.
 |
| *RESEARCH ASSISTANT, PSG College of Technology* － Coimbatore, India **Jun 2015 - May 2017*** Built medical device Sinusitis Pain Relief, integrating hardware and android app to treat sinusitis pain.
* Performed calibration tests with oscilloscopes, digital multimeters, force sensors, digital measurement systems.
* Established a **Printed Circuit Board (PCB)** for the wearable device and conducted clinical trials for device introduced.
 |

**Education**

|  |  |
| --- | --- |
| Master of Science: Biomedical Engineering, University at Buffalo, Buffalo, NY, **GPA: 3.75** | **Jun 2020** |
| Bachelor of Engineering: Biomedical Engineering, PSG College of Technology, Coimbatore, India, **GPA: 8.58** | **Jun 2018** |

**Publications**

* **Preethi Sivaswaamy Mohana**, Dr. Filip Stefanovic, et al., “***Time-Domain Modeling of Muscle Performance from Periodic Resistance Based Exercise Using SEMG***”, Pre-publication.
* L. Priya, S. Aarthi, **S. M. Preethi**, P. E. Jothi, et al., "***Development of Telecardiology Monitor using Internet of Things***," 2018 Second ICECA, Coimbatore, pp. 1435-1437

**LEADERSHIP AND COMMUNICATION SKILLS**

**Graduate Teaching Assistant**, E-Tinkering lab, University at Buffalo **May 2020**