**PREETHI SIVASWAAMY MOHANA**

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**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**

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| *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**

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| *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**

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| 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**