Prabha Sahiti Mandaleeka

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EDUCATION

THE JOHNS HOPKINS UNIVERSITY — Baltimore, MD
Master of Science in Biomedical Engineering — Expected June 2023
Relevant Coursework: Medical Imaging Systems, Computational Medicine - Imaging, Image Processing, Machine Learning for Signal Processing, Medical Image Analysis, Deep Learning for Biomedical Engineers

INDIAN INSTITUTE OF INFORMATION TECHNOLOGY, DESIGN AND MANUFACTURING — Kancheepuram, India
Bachelor of Technology - Electronics and Communication Engineering — June 2020
Specialization - Design and Manufacturing
Relevant Coursework: Advanced Digital Signal Processing, Control Systems, Systems Thinking for Design, Sociology for Design, Product Management, Innovation Management
Academic Affairs Secretary, Undergraduate Mentor, Innovation Council Member

SPECIALIZED SKILLS

Languages	Python, MATLAB, C, Embedded C
Libraries	ImageIO, Keras, Scikit-Learn, Tensorflow, Pytorch, OpenCV, MUST
Tools	Tableau, AWS, REDCap, Signal Processing, Image Processing, Machine Learning, Deep Learning, Design Thinking, Systems Thinking, Project Management

PROFESSIONAL EXPERIENCE

Artificial Intelligence Research Assistant — January 2022 - Present
JOHNS HOPKINS UNIVERSITY SCHOOL OF MEDICINE — Baltimore, MD

- Prepare imaging and clinical datasets; Assist with imaging annotation and data documentation on REDCap for the Artificial Intelligence for Detection of Pancreatic Cancer(AIDPC) team.
- Ensure compliance of data with security and IRB protocols; Develop and validate machine learning algorithms for clinical prediction models using Python.

Systems Engineering Project Associate — September 2020 - March 2021
INDIAN INSTITUTE OF TECHNOLOGY — Delhi, India

- Designed a control system for a motion simulator to read motion-specific Electromyographic Signal data and visualize corresponding prosthetic movement on MATLAB to increase adoption of Upper Limb Prosthesis.
- Formulated a module to evaluate developed control system behavior while performing defined standardized tasks.

Artificial Intelligence Engineering Intern — January 2020 - June 2020
MADEIT INNOVATION FOUNDATION — Chennai, India

- Used Python to analyze Heart Rate Variability and activity data for a new wearable activity tracker to provide real-time insights and implemented it at the cloud end using AWS Athena and QuickSight.
- Developed a preprocessing engine for a machine learning algorithm to evaluate athlete fitness and an algorithm to monitor stress and recovery in athletes. The regression model accounted for 98% test data variability.

Systems Engineering Intern — May 2019 - October 2019
STARTOON LABS — Hyderabad, India

- Built algorithms for signal preprocessing, parameter extraction and analysis of the Electromyographic (EMG) Signal in Python for a novel, real-time, wearable physiotherapy activity tracker.
- Improved the accuracy of IMU algorithms on edge for foot and ankle to 97% and co-authored a paper discussing the accuracy testing procedure and device performance.

COURSE PROJECTS

Research Project — October 2021 - Present

- Developed tools to detect over fitting of a Conditional Generative Adversarial Network for generating a Beam formed Ultrasound image from Radio Frequency channel data using MATLAB's Ultrasound Toolbox and Python.

Startup Sandbox — December 2018

- Led a team of two to produce market analysis, proof of concept and a business case for technological interventions for tuberculosis drug adherence as a part of a three week intensive Entrepreneurial Bootcamp.

PUBLICATIONS

Reliability of Smart Wearable Device PHEEZEE Versus Other Traditional Devices in a Podiatric Setting: A Comparative Study — September 2019
Haaris Mohsin Moosa, Mythreyi Kondapi, **Prabha Sahiti Mandaleeka**, Susurla V S Suresh
Abstract in proceedings of the *IFASCON 2019, 32nd Annual Conference of the Indian Foot and Ankle Society*