Prabha Sahiti Mandaleeka

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EDUCATION

Indian Institute of Information Technology Design and Manufacturing, Kancheepuram
Bachelor of Technology   **July 2016 - May 2020**

- **Major**: Electronics and Communication Engineering with a specialization in Design and Manufacturing
- **CGPA - 8.94/10**
- Relevant Courses: Advanced Digital Signal Processing, Embedded Systems Design, Signals and Systems, Control Systems, Systems Thinking for Design, Designing Intelligent Systems
- Workshops and Certifications:
    - AI : AI for Medicine Specialisation(Coursera)
    - Health tech: Fundamentals of Neuroimaging(Coursera), Electronic Systems for Cancer Diagnosis (NPTEL), Introduction to Cognitive Psychology (NPTEL)
    - Imaging: Biomedical Image Analysis (Datacamp), Digital Image Processing (NPTEL)

Sri Chaitanya Junior College
Senior Secondary   **July 2015 - May 2016**

- **Percentage**: 97.7% with the Telangana State Board for Intermediate Education

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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.*

INTERNSHIP EXPERIENCE

Project Intern   **January 2020 - Present**
***Mentor**: Dr Karthic Narayanan*   *MaDeIT Innovation Foundation*

- Worked on the physiological modelling of athletes.
- Designed and developed the statistical inferencing and the predictive model to monitor athlete performance.

Artificial Intelligence Engineering Intern   **October 2019 - December 2019**
***Mentor**: Murugesh SK, CEO*   *Scermlind Healthcare*

- Worked on Heart Rate Variability and Activity data for their device, 'Urufit'.
- Designed the preprocessing engine for the Machine Learning algorithm to evaluate athlete fitness.
- Designed the algorithm to monitor stress and recovery in athletes.

Systems Engineering Intern   **May 2019 - October 2019**
***Mentor**: Susurla V S Suresh, CEO & Managing Director*   *Startoon Labs*

- Worked on the Signal Preprocessing, Parameter extraction and analysis of the Electromyographic (EMG) Signal for their device, 'Pheezee'.

- Improved the accuracy of the IMU algorithms for the foot and ankle, at the firmware end on Segger Embedded Studio.
- Designed the accuracy testing procedure and conducted the testing on healthy subjects.
- Performed market research to determine the parameters for data analysis.

Startup Sandbox Program   **December 2018**
Mentor: Dr Sudhir Varadarajan, CEO   [*MaDeIT Innovation Foundation*]

- The Startup Sandbox Program, organized by MaDeIT, in collaboration with Entrepreneurship Development Institute of India (EDII), was a three-week Entrepreneurial Bootcamp.
- My team worked on technological interventions for adherence to the tuberculosis drug regimen.
- Performed market analysis, came up with product design, proof of concept and business plan for our product - 'Konseous'.

ACADEMIC PROJECTS

Brain Tumor Auto-Segmentation   **January 2020 - May 2020**

- Implemented an algorithm in Python to auto-segment neural MRI images using a 3D U-Net.

Breast Cancer Detection   **November 2019 - December 2019**

- Implemented an algorithm in Python on the MIAS Database to detect the probability of Breast Cancer using a Convolutional Neural Network.

ECG Signal Enhancement using an Adaptive Kalman Filter   **January 2019 - May 2019**

- Implemented an algorithm in MATLAB to enhance the ECG Signal extracted from surface electrodes embedded in smart textiles.

Chronic Wound Monitoring System   **January 2019 - May 2019**

- The device aims at improving the healing time of chronic wounds by monitoring surface parameters like moisture and temperature of the wound area.
- Worked on the embedded system design for the AT Tiny.
- Designed a flexible, fractal based, biocompatible sensor to detect moisture in the wound area.

TECHNICAL SKILLS

Languages	Python, MATLAB, C, Embedded C
Libraries	ImageIO, Keras, Scikit-Learn, Tensorflow, Pytorch, OpenCV
Tools	Arduino, Raspberry Pi, Segger Embedded Studio, Signal Processing, Image Processing, Machine Learning, Deep Learning