Prathic Sundararajan

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Education

Georgia Institute of Technology, Atlanta, GA **2018-Present**

- Biomedical Engineering Major (BME)
- Computing and Artificial Intelligence Minor (CS)
- Junior Standing with a *4.0 GPA*

Experience

R&D Engineering Intern (Part Time) *HealthCare Evolutions* **May 2020-Present**

- Utilizing Solidworks skills on a project meeting unmet needs to help with COVID-19 (In Progress)

Undergraduate Researcher *Gleason's Lab: Global Health Initiatives, GT* **2019-Present**

- Improved the efficiency of the current sensor/device prototype (hardware & software)
  - Device consists of a PPG Sensor which measures Pulse Wave Velocity to detect Pre-eclampsia
  - Revamped the Sensor & MATLAB Program interface (Sampling Rate Increase of 200%)
- Streamlined testing procedure by implementing continuous signal acquisition & analysis functionality
- Wrote preliminary testing protocols for testing to be used in IRB Approved Study [Starting Early March]

R&D Engineering Intern *HealthCare Evolutions* **May 2019-August 2019**

- Performed product analysis on an insulin pump with and without Avanos' Silversoaker catheters
  - Determined that flow rate remained within a ± 10% margin of error with and without a catheter
  - Concluded Nimbus II pump is safe to use with Catheters through trials of quantitative experiments
- Created & Submitted a 26-page technical report detailing the performance of the pump to the client
  - Conveyed our experiment findings & the importance of priming the catheter via the bolus function
  - Lack of priming led to a margin of error of 20-30% as shown by our experiments
- Created initial prototypes of *Ultrashield* (Recently patented Ultrasound Tech aimed to replace standard gel)
  - Utilized heat sealing techniques to create a 3 Layered Hydrophilic Pad: [Currently in Testing]

Undergraduate Researcher *Exoskeleton & Prosthetic Intelligent Controls Lab, GT* **2018-2019**

- Coded a MATLAB GUI (via appDesigner) to replace an inefficient Humotech controller
  - Implemented live data visualization & Image Processing to allow for tuning control parameters without pausing model during testing sessions (Increased efficiency by 25%)
  - Decreased the amount of time required for each testing session from 180 mins to 145 mins

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Projects

BME Robotics (Humanoid Sub-Team) *Georgia Tech* **2019-Present**

- Utilized Solidworks, 3D Printers & CNC tools to build a humanoid with the following parts: a torso, shoulders, arms and a gripper
  - Current Status: Initial Version of gripper mechanism is printed and is in alpha testing

Robojackets (3lb Battlebot – Entropi) *Georgia Tech* **2018-2019**

- Designed a 15 part robot on CAD (Major Parts: Weapon, Frame, Bent Back Plastic Sheet, Holes & Screws)
- Designed & Machined the robot using CNC tools from stock materials (Steel, AL & HDPE)
  - *Semi-Finalist (of 32 Teams)* in Combat Robots Competition

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Leadership

Suit Up Professional Prep– *Communications Committee Chair* **2018-Present**

- Facilitated a team of freshman members in executing events geared towards professional development
  - Guided members to successfully hold events and simultaneously help improve their leadership skills
- Organized social events with freshman attendance upwards of 100+ individuals throughout the year

Students Consulting for Non-Profit Organizations–*Sr. Business Analyst* **2018-2020**

- Created a donor analysis report using MATLAB to increase donor retention for City of Hope
- Identified patterns in donations by filtering 15,000 Data Points to write our donor report

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Skills

Technical: 3D Printing, CAD (SolidWorks), CNC Machining (Mills, Lathes, etc.), Simulink
Certifications: Biotechnology Lab Assistant, CITI Training (Biomedical Research Investigators & GCP)
Programming: Java, Python, MATLAB & MATLAB Apps/GUI, Python (Familiar), HTML & CSS