

KUSHAL SREENUPRASAD

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SKILLS

Programming: C++, C, Python, MATLAB, Arduino **Design:** P-spice, LT-spice, Simulink, SolidWorks
Engineering: Analog Electronic design, Test equipment and instrumentation, Diagnosis and Troubleshooting, Process control, Market research **Soft Skills:** Leadership, Collaboration, Critical thinking, Effective communication, Patient care

EDUCATION

Johns Hopkins University, Baltimore, MD, GPA: 3.8/4.0
Master of Science - Biomedical Engineering

Ramaiah Institute of Technology, Bengaluru, India, GPA: 3.82/4.0
Bachelor of Engineering - Medical Electronics

RESEARCH EXPERIENCE

Johns Hopkins Medical School, Baltimore, MD June 2020 – May 2021

Research Assistant- Thesis topic: MRI compatible cardiac RF ablation catheter with impedance-based tracking.

- Developing, testing, experimenting, and troubleshooting various prototypes of catheter designs and materials with a cross-functional team of Mechanical Engineers, Electrical Engineers and EP physicians.
- Designing catheter handle for bi-directional movement and MRI specific requirements using Solidworks (CAD).
- Utilizing Ensite Velocity Mapping system for experiments on impedance-based tracking. Providing technical assistance to EP physicians during their experiments with phantoms using the Ensite system.
- Communicating with clients for technical assistance with catheter design and material issues, maintaining related documents and occasional expense reporting.
- Engaging in diagnostic dialogue with EP physicians and clinical representatives during EP procedures at the Johns Hopkins Hospital to formulate solutions for user-friendly and patient-friendly catheter development.

TECHNICAL EXPERIENCE

Johns Hopkins University- Whiting School of Engineering, Baltimore, MD

Affordable Digital Pathology Slide Scanner

Aug 2020 - Dec 2020

- Developed a high throughput, portable and cost-efficient prototype of a digital pathology slide scanner for automatically scanning multiple slides remotely.
- Collaborated with pathologists from the Johns Hopkins Hospital for validation and troubleshooting with the device.
- Understood the process of developing a marketable medical device within a fixed budget while balancing trade-offs.

Lesterolight: A Non-invasive Cholesterol Monitoring

Sept 2019 - Dec 2019

- Developed a wearable non-invasive cholesterol monitoring device to screen patients diagnosed with borderline or high cholesterol levels using infrared or near infrared wavelengths to noninvasively obtain optical signatures indicating the level of cholesterol.
- Conducted thorough market research and proposed a business model for various healthcare technology investors across Maryland.

Quadriplegic Communication Device

Oct 2019 - Dec 2019

- Developed a communication headgear to allow quadriplegic patients to communicate through cheek contact with force sensors embedded in the headgear.
- User interface coupled with the sensors allowed patients to type sentences and communicate their daily needs.

Unitech Medical Systems, Bengaluru, India

Field Service Biomedical Engineer

Aug 2018 - Nov 2018

- Performed on-site repairs of biomedical equipment like ventilators, anesthesia workstations and defibrillators.
- Conducted troubleshooting and engaged in preventive safety maintenance to ensure safe and optimal performance.
- Supervised a team of 5 technical interns and handled customer relationship issues.