**SUMMARY**

Engineering graduate with a strong background in medicine and engineering. Experienced in research, design generation, project management, and team building. Currently seeking to gain experience in mechanical engineering.

**ENGINEERING EXPERIENCE**

**Innovation Intern –** *Stony Brook University Hospital* **Stony Brook, NY**

* Prototyped a food-dispensing device using needs-based engineering methods **September 2019 – May 2021**
* Proposed potential technological improvements in coordination with medical professionals
* Led a team to build a working prototype for a novel neonatal electrocardiogram
* **Project: NeoECG**
  + Generated the idea after finding a significant need to increase the comfort of the baby and the ability for nurses to work efficiently around a neonatal electrocardiogram (ECG) in a NICU setting. The design aimed to reduce rashes resulting from adhesive electrodes and work in a wireless configuration to reduce the number of wires on the baby’s chest.
  + Created a multidisciplinary team and delegated design goals based on team members’ strengths
  + Drafted general design blueprints and generated part ideas in Autodesk Fusion 360 after listing design criteria
  + Created a portfolio and presentations to attract potential investors to our project
  + Due to the COVID-19, the supply of parts was limited, and the original design goal could not be met. The team shifted to create an ECG that could be used in a home environment and alerted parents/physicians to abnormal rhythms
  + Extensively improved the design of the ECG after multiple quality tests, cost analyses, and part improvements.
  + Created a business and marketing strategy for our final prototype
  + Our project was presented to a medical professional, a senior engineer, and a patent lawyer to determine the efficacy of our design.

**Data Analyst/Research Assistant –** *Center for Understanding Biology using Imaging Technology* **Stony Brook, NY**

* Developed various predictive models based on existing data from patients **April 2019 – Present**
* Assisted with developing a machine-learning model to predict patient outcomes
* Taught new assistants coding and other necessary laboratory methods
* **Thesis: Quantitative Analysis of Actigraphical Data for Major Depressive Disorder**
  + The goal of this study was to find if patients improved, and would continue to improve, from major depressive disorder using actigraphical data like the ones stored by a pedometer.
  + Created the cosinor model for predicting patterns in patients’ Hamilton Depressive Scale before and after treatment to determine if a patient did benefit from escitalopram and cognitive behavioral therapy (CBT)
  + Switched to using singular spectrum analysis (SSA) after finding studies that suggested better predictive accuracy and less variability from the data compared to the cosinor model
  + During COVID-19 shutdown, the lab verified patient files using the Stony Brook databases and ActiCal data.
  + Worked closely with a graduate student to create a XGBoost machine-learning algorithm to create a Poisson regression to predict a patient’s continued response to escitalopram/CBT treatment
  + Assisted in writing a technical paper that is currently being peer-reviewed

**MEDICAL EXPERIENCE**

**Medical Assistant –** *Southern Gem Hospital* **Hyderabad, India**

* Assisted the receptionist with welcoming and discharging patients into the clinic **June 2019 – August 2019**
* Measured patient vitals and assisted Dr. Nathani with various tasks
* Scribed patient information into the hospital database

**Health Programs Advisor –** *Health Guardians of America SBU*  **Stony Brook, NY**

* Co-founded the club and recruited new members **February 2018 – February 2019**
* Updated and modified FitLifeFlow app as needed
* Raised awareness of obesity in college students to improve campus health

**Emergency Medical Technician –** *Wantagh-Levittown Volunteer Ambulance Corps* **Levittown, NY**

* Received EMT-B training from St. John’s University **March 2016 -July 2019**
* Assisted EMS professionals on an ambulance when necessary.
* Attended yearly competitions with teammates

**Shadow****–** *Kingsbrook Jewish Medical Center* **Brooklyn, NY**

* Helped Dr. Shukla and medical students take patient vitals **June 2015 - August 2019**
* Assisted with scribing patient information into the hospital database
* Operated and maintained electrocardiogram and spirometry machines under supervision

**TEACHING EXPERIENCE**

**Tutor –** *Mathnasium* **Syosset, NY**

* Worked closely with teachers, parents, and students to achieve success in mathematics **November 2019 – Present**
* Offered classes to students struggling in biology, chemistry, statistics, and physics
* Independently managed Mathnasium centers

**Teaching Assistant –** *Biomedical Engineering 305 (Biofluids)* **Stony Brook, NY**

* Held weekly office hours and review sessions for students **February 2021 – May 2021**
* Assisted with the grading of students’ homework
* Proctored and graded midterm and final exams

**Teaching Assistant –** *Chemistry 152 (Advanced General Chemistry)* **Stony Brook, NY**

* Held weekly office hours and review sessions for students **August 2018 – December 2018**
* Encouraged student participation by facilitating discussions during lectures and recitations
* Worked with graduate teaching assistants to organize curriculum materials during meetings

**HONORS, AWARDS, AND MEMBERSHIPS**

* Dean’s List
* Member of Tau Beta Phi Engineering Honors Society
* Member of Alpha Eta Mu Beta Biomedical Engineering Honors Society
* Brandeis University Global Youth Summit on the Future of Medicine July 2016 Symposium finalist

**EDUCATION**

**Stony Brook University Stony Brook, NY**

Bachelor of Engineering, Biomedical Engineering, Cellular and Molecular BME **May 2021**

Magna Cum Laude (GPA: 3.75)

**SKILLS**

Software: Proficient in Office, MATLAB, AutoCAD, R, SPSS, Java, Python, Finite Element Analysis

Languages: Intermediate Spanish, Fluent Telugu, Beginner Hindi

Certifications: EMT-B