Sagar Bhaukaji

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OBJECTIVE: Biomedical engineer looking for an entry level position as an engineer in medical device field

EDUCATION:

The University of Texas at Arlington, Arlington, TX — May 2019
Bachelor of Science in Biomedical Engineering (Dean's List) — GPA: 3.89
Minor in Electrical Engineering

North Lake College, Irving, TX — May 2016
Associate of Science Degree — GPA: 4.00

COMPUTER SKILLS: LABVIEW, C/C++, MATLAB, SolidWorks, GitHub, MS Office, LabQuest, BIOPAC

TECHNICAL SKILLS: Software Testing, Statistical Analysis, Signal Processing, Circuit Design and Analysis

WORK EXPERIENCES:

Junior Automation Engineer, GE Appliances, Louisville, KY — July 2019 - Present

- Used LABVIEW based laundry tool to test software for consumer appliances and embedded software
- Develop manual test tickets to validate software design specifications and document the test procedures and results in ticket tracking system using agile methodology
- Write automation scripts in TestStand to automate manually tested tickets and update them regularly according to the design specifications added by software developers

Procurement Assistant, National Math & Science Initiative, Dallas, TX — May 2016 - July 2019

- Placed an online order for 46,000 items from 29 different vendors that was worth $2.4 millions
- Created a record keeping system in excel to track items that were delivered to 230 partner schools
- Assisted Finance department to submit 2,665 unique invoices during summer AP events

CAPSTONE PROJECT: Heart Rate Monitor using Photoplethysmography (PPG) — Aug 2018 - May 2019

- Designed an analog circuit that would detect the low amplitude signal using photodiode, filter the noise using band pass filter and amplify the signal 121 times and display the PPG waveform on the screen
- Programmed an Arduino mega to detect the PPG waveform peaks and calculated heart rate with 5% error
- Demonstrated the final prototype and poster in Senior Design event and Innovation day

RESEARCH EXPERIENCE: — Jan 2017 - May 2019

Obstructive Sleep Apnea (OSA) induced stress on Autonomic Nervous System

- Analyzed ECG and BP signal collected from 15 simulated apnea subjects and 10 sleep lab patients
- Developed an algorithm that clipped BP and ECG channels of OSA events from 8 hours sleep data
- Used regression analysis and cross-correlation techniques on blood pressure and heart rate variability

ACADEMIC EXPERIENCES:

Bioinstrumentation Project — Jan 2018 - May 2018

- Built an analog circuit system to acquire intrinsic signal then applied digital filters to smooth health data
- Designed temperature measurement system using thermocouple and calibrated the system
- Constructed a setup to measure optical attenuation coefficient of tissue like phantom

Biomedical Measurement Project — Jan 2017 - Dec 2017

- Conducted experiments, then analyzed, interpreted and presented physiological data
- Used software interface like LabQuest, BIOPAC and LABVIEW for data acquisition of biological signals such as electrocardiographs, electroencephalographs, electromyographs, and electrooculography
- Collected and analyzed data using Microsoft Excel to test hypothesis and provide meaningful insights