

SUBRAT ACHARYA

(859) 684-1934 | subratacharya99@gmail.com | github.com/subratacharya99

Objective

Software Engineer with extensive experience in developing and enhancing software solutions for manufacturing and health technology. Proven adaptability, reliability, and a strong willingness to learn, ensuring proficiency in any task when given the opportunity. Demonstrated ability to work independently as well as in a team setting.

Education

Bachelor of Science and Engineering in Biomedical Engineering
University of Iowa, Iowa City, IA

Aug 2018 to May 2022
GPA: 4.0/4.0

Professional Experience

Software Engineer at Avantor
Barrington, IL

Aug 2022 to Present

- Led the End of Line (EOL) tester software development for Masterflex touchscreen pumps, overseeing all aspects from design to release (Python, Go, Vue.js, Typescript)
- Enhanced the EOL tester software by improving application efficiency and modifying test cases to efficiently detect hardware failures, resulting in improved product quality and reduced manufacturing defects
- Played a pivotal role in the launch of six new pump models, actively researching and testing new features to create comprehensive test cases for the EOL software
- Developed the Masterflex Inventory Management System serverless application on AWS leveraging Cloud Formation, Cognito, API Gateway, Lambda, S3, and DynamoDB to collect, store, and analyze production and quality data for Masterflex pumps
- Assisted in the conversion of manual system and smoke testing to automation using ROBOT Framework
- Overtook the development of the serial communications module in the embedded pump software that allow users to control and monitor pumps using the RS-232 serial protocol
- Transitioned responsibilities from the external development team, Planet Innovation, to in-house management, demonstrating strong adaptability and technical skills and saving the company over \$500,000
- Collaborated closely with a cross-functional team of software engineers, firmware engineers, mechanical engineers and end-users, fostering effective communication and continually improving software

Software Engineering Intern at iotaMotion
Iowa City, IA

Jun 2020 to Feb 2021

- Researched and developed a sophisticated web application utilizing Django and PostgreSQL to store, analyze, and present auditory health data, which played a role in supporting the company's research initiatives and clinical trials.
- Demonstrated strong problem-solving skills by designing and implementing signal processing algorithms, enabling seamless processing and visualization of electrocochleography data
- Worked closely with engineers and engaged potential end-users to gather feedback, leading to improvements that tailored the application to the users' needs
- Began development on a computer vision based mobile application using React Native to facilitate the collection and storage of auditory health data
- Utilized the OpenCV library to create an image recognition algorithm used to scan audiograms and extract data allowing efficient and accurate data collection

Leadership Experience

Teaching Assistant – Engineering Fundamentals II: Circuits

Aug 2019 to Aug 2021

- Led 50-minute discussion classes each week to supplement topics covered in lecture and work through problems
- Held office hours for 5 hours each week to assist students with homework and answer course-related questions
- Led review sessions for up to 60 students before midterms and finals to help students prepare and answer questions

Skills

Python, C++, Java, JavaScript, Golang, MATLAB, HTML, CSS, TypeScript, Linux, PostgreSQL, NoSQL, DynamoDB, Django, Flask, Asynchronous Programming, Vue.js, Node.js, React.js, Git, Docker, AWS, Serverless Architecture, Full-stack Web Development, OOP, Agile, Computer Vision, Signal Processing, Image Processing, Embedded Linux, Unit Testing, Integration Testing, Automation Testing