Daksh Shende

dakshs@umich.edu • +1 7345969038 • 1072 Island Drive Ct, Ann Arbor, MI, 48105

EDUCATION

University of Michigan **Ann Arbor, MI**

Master of Science in Electrical and Computer Engineering *May 2024*

GPA: 3.5/4.0

Coursework: EECS 470 – Computer Architecture, EECS 598 – VLSI for Wireless Communication and Machine Learning, EECS 554 - Introduction to Digital Communication and Coding, EECS 557 - Communication Networks, EECS 452 - Digital Signal Processing Design Laboratory, ENTR 560 – Project Management & Consulting, ISD 520 - Introduction to Systems Engineering.

G H Raisoni College of Engineering **Nagpur, MH, INDIA**

Bachelor of Engineering in Electronics and Electrical Engineering *May 2022*

GPA: 9.20/10.00

Honors/Awards: Received toppers award for being 1st and achieving academic excellence in the department.

WORK EXPERIENCE

Solar Industries India Ltd **Nagpur, MH, INDIA**

Intern, IoT Developer *Oct 2021 – Jul 2022*

- Developed an automated system for the manufacturing plant that monitors the Industrial explosive production, wirelessly of 40 remote sites to provide a real-time update of alerts to the management.
- Executed OPC-UA protocol for the transmission of data from field devices to gateway seamlessly and with 0% loss any latency.
- Created visualizations on web dashboards showcasing 100% data gathered and all the analytics required to make business decisions. Also, these dashboards were able to work on HMI's using software Integration.
- Prepared machine learning models in Python for Predictive Maintenance technology which lets the managers know about unplanned downtime with an accuracy of 90% and can save costs with the best resource allocation.

RELEVANT EXPERIENCE

PIXO VR **Ann Arbor, MI, USA**

Project Management Consultant *Jan 2023 – Apr 2023*

- Administered as a Project management support and established a survey that researched 10 potential companies that can partner with PIXO to develop VR training for customer business management.
- Managed scheduled meetings with all the companies, relationship building, and advised cross-functional teams to understand offerings and viability with PIXO for 100% customer management.
- Benchmarked all the companies using program management decision models such as the Pugh matrix on a 100% scale and SWOT analysis reports evaluating potential portfolios.

PROJECT EXPERIENCE

Project Title – Haptic Sound Localization

Course – EECS 452 – DSP Design Laboratory *Jan 2023 – Apr 2023*

- Coded an algorithm for sound localization using beamforming of a hardware 4 & 6 microphone phased array and validation of testing the application with MATLAB simulation.
- Engineered the technique of Time Difference of Arrival (TDOA) and Generalized Cross Correlation Phase Transform (GCC-PHAT) algorithm using Fast Fourier Transform (FFT) for detection of sound in 360-degree direction.
- Implemented Filtering techniques for bifurcation and FFT implementation to localize the sound with 100% accuracy.
- Established MQTT connection for data transmission and to control the 4 haptic actuators for the direction of sound.
- Test engineering of device characterization in lab simulation debugging using test equipment like spectrum analyzer, digital oscilloscope, and power supplies.

SKILLS

Technical Skills – Verilog/VHDL, Python, C, C++, IoT, Microcontroller, FPGA, Raspberry Pi, DSP, FFT, IFT, Filters.

Wireless Protocols - OPC UA, MQTT, RS485, Zigbee, LoRa, ESP-Now, WiFi, SPI, I2C, UART.

Project Management, Analytics, Decision Modelling, Professional Development, Linux.