Boosi Mouneswara Reddy

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PROFILE

A cross-disciplinary team player who enjoys healthy discussions about problems and polishing design, understands the importance of delivering reliable solutions and strives to be a value-adding asset. Driven by intense passion to learn and demonstrate skills for growth and good causes.

Education

Amrita Vishwa Vidyapeetham, Amritapuri, India

Bachelors of Technology in Electronics and Communication Engineering

Sri Chaitanya Junior kalasala, Vijayawada, Andhra Pradesh

Class XII

Dr.KKR Goutham High School, Gudiwada, Andhra Pradesh

Class X

INTERNSHIP

Singapore University of Technology and Design (SUTD)

Research and Design Intern

Feb 2023- Mar 2023 Singapore

2021 - present

2019 - 2021

2019

GPA: 8.32/10.0

Percentage: 96 %

GPA: 9.8/10.0

• Worked in the research field of Swarm Robotics in collaboration with SUTD and Wefa Robotics and as a part of development of smorphi imaginary application and the hardware assembly of the smorphi robot. Worked on gesture of the smorphi robot using the Haskylens.

Humanitarian Technologies Labs (HuT Labs) Student Intern

Jan 2022 - present Kerala, India

• Focused on the evaluation of Robotic Operating System (ROS) in conjunction with RVIZ and Gazebo software.

ACHIEVEMENTS

Runner up and Best Design Award in IDC Robocon 2023 Chulalalongkorn University, Bangkok, Thailand

• Played a crucial role as a team member in an international robotics competition. Demonstrated technical expertise and problem-solving by designing, building, and operating a robot for challenging tasks.

Semi-Finalist in Tech med hackathon at Amrita hospital, Kochi (AIMS)

• Contributed to a team that developed innovative solutions for healtheare challenges.

PROIECTS

Remote Controlled mobile robot prototype

• Designed and implemented a remote controlled mobile robot which is able to to pick up the objects and place it in desired place using a Arduino Mega 2568 microcontroller, Servo Motor and buck convertors.

Gesture Controlled Wireless Smorphi

• Created a wireless communication between two ESP32 Master Boards for controlling the movements of smorphi with the help of gestures which we trained in Haskeylens.

Iot Based smart street light system

• Designed and implemented an loT-based smart street system leveraging Arduino UNO,Ultrasonic Sensor,and IR components, reducing the accidents and current usage of street lights.

Optimal position of LIDAR - Self-E Wheel Chair

• Engaged in a research project focused on optimizing the positioning of LiDAR technology for integration into an autonomous wheelchair designed to assist physically challenged individuals and elders, developed by Megara Robotics and successfully deployed the robot within the Robot Operating System (ROS) framework.

MosquitoID: Wingbeat Frequency-Based Species Classification

- Enhancing public health and environmental monitoring by enabling targeted mosquito control strategies and supporting broader disease prevention efforts.
- Developing a novel system for mosquito species identification using unique wingbeat frequencies, combining signal processing and machine learning techniques.

SKILLS

Programming Languages: C, basics of python, Arm Assembly Level, MATLAB, Verilog HDL.

Tools: Tinker cad, Visual studio, Vivado, Arduino.

Database:SQL

Interests: Digital Electronics, Digital communication, Veriolg HDL, Robotics, IOT **Soft skills:**Problem solving,Adaptability,Team Collaboration,Time Management.

PUBLICATIONS

"Smart Cane for the Visually Impaired Using FPGA Technology" published in 4th ASIANCON 2024 Pune, India".

Developed a smart cane ,employs an FPGA (Field-Programmable Gate Array) to improve the walking experience, incorporating an ultrasonic sensor, a 7-segment display, and a light-dependent resistor.

POSITIONS OF RESPONSIBILITY

IEEE-Event chair and education society student chair person:

Heading an IEEE student body group with a core interest in Humanitarian technology for improving lives and problem solving through Electronics and Robotics

COMMUNITY OUTREACH

Technical and managment coordinator- ROBO ROARZ 2024 held in Singapore

• Actively served as coordinator in both technical and managment teams in ROBO ROARZ competition 2024, where i managed the technical faults and the coordination between the teams during the competition.

Volunteer for Research and Innovation Summer Champ(RISC) workshop

• Engaged in doubts clarification for students of twelve teams that are participated in the four day champ.

Mastering Phyton and Robotics(One day workshop)

• Along with the group of five members,we conducted a one day workshop for secondary school students to develop their technical expertise in Python and Robotics.