Sona Philip

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EDUCATION

Government Engineering College Thrissur
Bacheolor Of Technology Electronics and Communication — December 2020 - June 2024

PROJECTS

WALL PROJECTION | *HX711 on breakout board, Arduino, Loadcell (5kg), Plywood, force sensors*
This project involves the integeration of sound and light. A loadcell Arduino is used to control the force given to the animal figures. As a result of the force given to the animal figure, the sound of the animal and light can be observed. controllers, sensors, output devices, communications protocols, and a user interface are used in this project.

SENSORIUM |*OpenCV and Kinect for Windows SDK v1.8, Visual Studio, Raspberrypi, 8drv8833 motor drivers, Wearable Haptic Devices, IR Depth Sensing Cameras* https://github.com/Sensoriumeyic/Full-code
The project helps visually impaired people to walk independently. This project captures and processes depth data from a Kinect sensor, segments the depth image into smaller groups, thresholds the depth values into discrete levels, and sends the processed data to an Arduino via serial communication. The primary applications of this project include depth-based interaction and real-time visualisation of depth data. A glove in the hand of the visually impaired had vibrators that were controlled by motor drivers and would start vibrating when the cameras detected any object in front of the person.

PROGRAMMABLE POWERSUPPLY|*OP-AMP, TRANSFORMER, VOLTAGE REGULATOR, CIRCUIT DESIGNING*
A programmable power supply is a device that provides adjustable DC voltage and current output for various electronic applications as per the input values provided. It is commonly used in laboratories, manufacturing environments, and research facilities where precise and controlled power is required.Designed the voltage ranges, specifications of transformer, tappings, bridge rectifier & voltage regulator. Integerated constant current & constant voltage IC. Used relays, motor encoder and mcu to control the output voltage without manually changing the required voltage.

SKILLS

Technical Skills:	Python , Embedded C, Analog Circuits, DSP, Embedded Systems, Raspberry pi, Vlsi
Tools:	Airtable, Figma, Docs, Microsoft Excel
Platforms:	Leadership, Team Management, Problem Solving, Team player,
Other:	RTOS, Embedded C Language, Force sensors and actuators

EXPERIENCE

GOOGLE DEVELOPER STUDENT CLUBS — Government Engineering College Thrissur
Google Developer Student Club Lead — August 21 ,2022 - April 15, 2023

- Headed a cross-functional team of 30 (developers and designers) aimed at improving the Technological Culture in our campus
- Organized talk session, workshop ,project building and helped over 35 students to get started in hackathons
- Formulated different strategies which lead to a community growth of participation 100 plus participants in each event and accelerated women participation by 30%

Tinkerhub GECT — Government Engineering College Thrissur
Women in Tech Lead — Jan 2022 - Jan 2023

- Increased the number of scholarship applicants among women
- Women started to participate in hackathon and their invlovement in Tech related activities increased by 10%.
- Conducted inspiring talks and career-building sessions, which helped them have a voice in all tech-related fields.

Hailabs — Remote
Data Science Intern — March 2022 - Present

- Provided content based on machine learning for school students in classes 6–10
- Back end development of Data Science Olympaid

Inker Robotics Thrissur, Kerala
Project Development Intern April 2022 - Present

- Designed a sensory room which is a specialized therapeutic space to provide a stimulating and calming environment for children affected with autism
- Collecting report and survey of children for their mental development
- Implemented wall projection technique using loadcell arduino and improve the activity of autistic children

AWARDS

GRACE HOPPER SCHOLAR 2022

NATIONAL FINALIST IN EYIC -EYANTRA IIT BOMBAY COMPETITION IIT BOMBAY
Our team was one of the top 10 finalists of the eYIC National Finals

First Prize in Deck Hacks Hackathon

Google Developer Student Club Lead at Government Engineering College Thrissur.