Herbert Mampuzha Sandeep
Curriculum Vitae

PERSONAL DETAILS

Fathers Name	Mampuzha Mathew Herbert
Mothers Name	Kanjamala Pappachen Minimol
Birth	July 17, 1996
Mobile	(91) 9497025304
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ACADEMIC DETAILS

B.Tech Electrical Engineering   2015-2019
IIT Hyderabad
    CGPA   8.34

XIIth **Standard**   2013-2014
Chinmaya Vidyalaya Vaduthala
    Board   CBSE
    Grade   A1 in all subjects

X^{th} **Standard**   2011-2012
Chinmaya Vidyalaya Vaduthala
    Board   CBSE
    CGPA   10.00

AREA OF INTERESTS

- Embedded Systems

- IoT

- Chip Design

PROJECTS DONE

Home Automation System using Arduino , Bluetooth and Android phone
    Home Automation System was made during the 1st semester. A mobile app was made using MIT App inventor and we included Google's text to speech convertor. The mobile was connected to a Bluetooth module HC05 via Bluetooth. The Bluetooth module was connected to an Arduino which controlled the state (On or OFF) in which the different appliances were. The output from the Arduino was sent to a Voltage Relay which was connected to each of the appliance. Based on the output from Arduino the circuit was either open (Appliance is Off) or closed (Appliance is On). Let's say if we wanted to turn on a light we just had to press the Lights on button on the app or sayl lights on, to the Google's text to speech convertor. This message reaches the Arduino via the Bluetooth module. The output from the

Arduino is sent to the voltage relay and the circuit is completed and the lights are turned on.

Wireless Switching using RF

Wireless Switching using RF was a project we did under Dr. G.V.V. Sharma Sir. It was implemented in the Faculty Block. The aim of the project was to create an innovative way to separately control a group of lights connected in parallel without tinkering much with the connection initially built. The project helped in reducing the power used as we could control each light separately. The switches were connected to a transmission module and the light was connected to a voltage relay. Each transmission module and receiver module had a unique address which ensured that no data is received by the wrong receiver module.

Passenger Counter using LDR

The counter data was transmitted to a mobile phone via Bluetooth. A passenger counter was made using two LDRs (Light Dependent Resistor) as sensors. Based on the order in which the LDRs sensed movement, the counter would increment or decrement. The count of people in the public vehicle is sent in real time to Bluetooth Terminal App on the phone via Bluetooth. We feel that this project could help prevent overcrowding of public transport.

Flappy Birds Game

A Flappy Birds game was made by interfacing an Arduino with a push button and an LCD screen. The duration that the button was pressed or released decides how high or low the bird went.

ONGOING PROJECT

ECG Data transmission to a mobile phone via Bluetooth

The project is to design a portable ECG. The ECG data is received in real time from the lead and sent to a Raspberry Pi which processes the data. The compressed Data is sent to an Android phone via Bluetooth. The received data is then sent to a Cloud Server - Google Firebase. If any abnormalities is detected a doctor nearest to the patient would be intimated. I am working on compressed ECG Data transmission from Raspberry Pi to a mobile phone via Bluetooth and uploading of data to a Cloud server and also retrieving the data from cloud and displaying the data on a GUI.

TECHNICAL SKILLS

Languages	VHDL and Verilog
	C and C++
	Embedded C
	Python
	Fortran
Databases	MySQL
	Postgre SQL
Tools	MATLAB and Simulink
	Xilinx ISE+
	Cadence
	ModelSim

INTERNSHIP

Entrepreneurship- Egypt -Decent work and economic growth   2018
Engineer's Syndicate,Old Damietta
      Duratuion   45 days
   Teaching students about the meaning and importance of Entrepreneurship and also about how to build a start up and the different phases associated with it.

CO-CURRICULAR ACTIVITIES

- Member of the Student body (Post - Academic Affairs Secretary)

- Counselor at Sunshine, Counseling cell of IIT Hyderabad

- Class Representative for the academic year 2015-2016

- Event organizer for college fest - Elan and Nvision 2017

STRENGTHS

- Positive Attitude

- A good team leader and a team player

- Good communication skills

- Good listener

- Hardworking