BARNABH CHANDRA GOSWAMI

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https://github.com/Barnabh

Education

The LNM Institute of Information Technology, Jaipur **2019-2023**

B.Tech in Electronics and Communication Engineering *Current GPA (till 7th Semester): 7.54*

Kendriya Vidyalaya No.1 Kota, Kota **2018**

CBSE, Class 12th *Percentage: 90.6*

Kendriya Vidyalaya No.1 Kota, Kota **2016**

CBSE, Class 10th *CGPA: 10.0*

Key Expertise / Skills

- RTOS
- Embedded Systems and C
- Arduino
- Proteus
- MATLAB
- VHDL
- NI Multisim
- Xilinx
- Digital Communications
- IAR Workbench
- MEMS
- TIVA TM4C123GH6PM Board
- Intel 8085 and 8051 working & simulation

Projects

FPGA Implementation of BPNN for estimation of harmonics **Jan 2022 – Dec 2022**

- The aim of the project is to create a hardware model which detects Fundamental Harmonics from the random waves generated in nature in the form of frequency, amplitude or phase etc. using Neural Network.
- https://github.com/Barnabh/Detection-of-Odd-Harmonics-in-Standing-Wave-using-Neural-Network

Toll Booth System using Soft Real-Time Systems (RTOS Project) **Oct 2022 – Dec 2022**

- This project is about how: “I created a Toll Booth system for one vehicle only which closes its the barricade on vehicle detection and on exiting from parking lot it counts the total number of vehicles parked there one at a time."
- https://github.com/Barnabh/Toll-Booth-System-with-smart-barricades

Making of a Practical Lux Meter (Light Intensity Meter) using Embedded Systems **Mar 2022 – May 2022**

- In this project we measure the light intensity using Light Dependent Resistor (LDR) and TM4C123GH6PM board. We will first start with the observations by defining the relation between light intensity and resistance so that we can study the graph by manually plotting it, doing calculations we will find the experimental value vs theoretical value of Light Intensity for a given LDR and by comparing, we can check its accuracy. Hence finalizing the product.
- https://github.com/Barnabh/Making-Lux-Meter-using-TM4C123GH6PM

Try to study a very rough "Low-Field Magnetic Sensor with a Variable Capacitor" with the basic understanding of GMR Technology **Feb 2022 – May 2022**

- In this project we try to study a very rough amateur Low-Field Magnetic Sensor with the help of GMR Technology, we study how the Giant Magnetoresistance (GMR) works and then to get an inspiration to use it in the modern world as a sensor.
- Finally, to get the basic idea that with the MEMS we can make a very subtle Magnetic Sensor using GMR Technology by understanding its concept.

Stochastic Geometry modelling and Analysis for Intelligent Reflecting Surface **Aug 2021 – Oct 2021**

- Here we will discuss that how can we reduce the number of towers keeping 5G network speed constant in a particular area for which we will use RIS (Reflecting Intelligent Surface) on buildings and then by using Stochastic Geometrical approach we try to find the best possible combination in it.

- This project comes under the "mini project" although it was not completed but the knowledge and skills, I gained found to be useful, that's why I mentioned it.

Most Basic Function Generator using Arduino Uno and Proteus **Aug 2020 – Dec 2020**

- In this project we will make a Function Generator first using Arduino Uno and then using Proteus. Where our function generator gives us a single output, which will be Square, Triangular, Sawtooth or Sinusoidal wave.
- https://github.com/Barnabh/Function-Generator-Using-Arduino-Uno
- https://github.com/Barnabh/Function-Generator-Using-PROTEUS

Publications / Research Papers

Table Tennis shot detection using Deep Learning **Jan 2023**

- My team recorded a huge database of 5 different Table Tennis shots of 10 different players of varying skill levels. In total the database has thousands of individual clips.
- This data was made to go through a recursive neural network, so that the model can detect any shot shown to it in future.
- Research Paper Link: https://ijsrem.com/download/involuntary-table-tennis-recognition-using-recurrent-neural-network-on-the-perception-based-data/

Co-Curricular & Extra Curricular Activities

- Mathematics Tutor at Gauth Expert, Link: https://github.com/Barnabh/Gauth-Expert-Offer-Letter
- YouTube Channel
- LNMIIT Football League Participant
- Actor and Background Sound Designer in Short Film, which premiered during the College fest. Link: https://youtu.be/cdR-_4Hj8hA

Certification

- NGO Certificate from Mess Workers Program (MWP): The NGO certificate I obtained by participating in the mess workers program demonstrates my commitment to social responsibility and community service.
- Udemy The Complete Mastering & Data Structures & Algorithms using C and C++.
- The certificate verifies I successfully completed the full course, The Complete Node.js Developer Course.
- https://github.com/Barnabh/NGO-Certificate
- Certificate Link: https://github.com/Barnabh/Udemy-Certificate

Personal Interests / Hobbies

- Pianist
- Playing Guitar
- Footballer
- Astronomy
- Competitive Gaming