SHIVAM GUPTA

Electronics and Communication Engineering Undergraduate

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EDUCATION / COURSES

Bachelor of Technology

Dr. S. P. Mukherjee International Institute of Information Technology

Aug 2017 – Present Atal nagar, Chattisgarh ,India

Intermediate/+2

Adarsh Vidya Mandir(CBSE)

May 2017 Unnao, India

Matriculation

Adarsh Vidya Mandir(CBSE)

May 2016 Unnao, India

ACHIEVEMENTS

- 2nd position at DIZHARD Circuit Designing event, Technovate, IIIT naya raipur
- runner up at Industria-Academia Meet 2019
- top 10 project in Scientific 2017, IIIT Naya raipur
- top 98 percentile score in JEE Mains 2017

TECHNICAL SKILLS

Languages: C, C++, JAVA, Verilog, HDL, Assembly language programming

Script: Python, Linux Shell Scripting

Web dev: HTML5, CSS3, Javascript, PHP, JSP, MySQL

Libraries/Packages: OpenCV ,Tensorflow, Scikit-Learn, Scipy, Matplotlib

Operating System: Windows, Linux

Applications: Cadence, NI Multisim, Matlab, Xilinx Vivado, Oracle Database, Jupyter Notebook, CST Design Studio

Hardware: 8085, 8086, 8051, Aruino UNO, Raspberry Pi, VLSI design

IT security: Blockchain, Network security, Web Apps security

PROJECTS

Path Loss Prediction Based on Machine Learning (Present)

Path loss prediction is of great significance for the performance optimization of wireless networks. With the development and deployment of the fifth-generation (5G) mobile communication systems, new path loss prediction methods with high accuracy and low complexity for such different models are proposed and after all experiment we introduced classical machine learning model to predict the loss path.

Magnetic Levitation using PID algorithm (Present)

- The concept behind magnetic suspension is to use the magnetic force generated by electromagnet to counteract the effect of gravity on the ball hence when these two forces are balanced, there is a point of equilibrium.
- A way to solve this control problem is to linearize the system around these equilibrium, or operating points and use conventional linear control techniques.

FMCW Radar Design (Present)

- FMCW Radar contains two Antennas - transmitting Antenna and receiving Antenna as shown in the figure. The transmitting Antenna transmits the signal and the receiving Antenna receives the echo signal.
- We are using CST suite to design antenna for Radar.

Blockchain Based Electronic Voting Machine (2019)

- Current Voting system involves many layers of authorities which make it complex, time consuming and costly.
- In this project we conduct voting on Blockchain environment developed on Python which make it less time consuming, tamper-proof and easy, with real time counting.

PHP based Discussion Forum (2019)

- Integrated Discusssion forum based on PHP 7 can be deploy on any site with PHP support.
- It has a login portals and all basic requirements of a discussion forum like creating topic, creating subject with privilege restriction and all data stored in SQL Database.

Emotion Recognition Using PCA algorithm (2018)

- Humans are used to taking in non verbal cues from facial emotions. Now computers are also getting better to reading emotions.
- The emotions can be classified into 7 classes — happy, sad, fear, disgust, angry, neutral and surprise. We use PCA algorithm to classify them in MATLAB.

REAL-TIME MOVING VEHICLE COUNTING SYSTEM (2017)

- Moving vehicle detection, tracking, and counting are very critical for traffic flow monitoring, planning, and controlling.
- Implemented in Visual python code with OpenCV development kits.

IOT Based Hygiene and Pollution Monitoring System (2017

- Monitoring air for gases like Co2 and Ammonia in environment.
- It uses MQ135 gas sensor and DHT11 sensor to measure gas levels and temperature respectively.