SATHVIK S

Electronics and Communication Undergraduate

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EXPERIENCE / INTERNSHIPS

Summer Intern

National Institute of Technology Karnataka - Dept. of ECE

📅 Jun. 2019 - Jul. 2019   📍 Surathkal, IN

- Notably Involved in building a wearable device for KMPC Hospital".
- Developed a single error correcting Hamming Code, learnt concepts of LDPC Codes and BCH/ReedSolomon Codes. Also, got a good exposure towards working in a research field".
- Engaged in working on Intel Galileo gen 2 boards at a precursory level, to get an exposure.

Embedded Intern

TIF- LABS Pvt Ltd. (Robocraze)

📅 Dec. 2017 - Jan. 2018   📍 Bangalore, IN

- As an intern got familiarised into technologies like Embedded Systems, and Internet of Things using MQTT and HTTP.
- Completed basic hands-on training on Arduino, NodeMCU and ESP32.
- Was majorly involved in a project on developing experiments for 'IOTIF Manual'
- Built and tested IOTIF trainer Kit and got introduced to Raspberry Pi.

PROJECTS

NIE Summer of Codes 5.0

- Projects based on Web server, Bluetooth SD card reader, Remote Temperature logger, OTA, Web Client, MQTT & HTTP Protocol, etc. built using ESP 32 and SD card module.

Wireless Data Transmission using LASER

- Stream of data bits were transmitted via LASER at the transmitter end
- An Light Dependent Resistor was used as a photo detector at the reception
- Arduino Nano was used at transmission and reception end
- The goal was to demonstrate a prototype for Optical Communication

Gradient Descent from Scratch

- Implemented Gradient Descent Algorithm to minimize the Mean Square Error
- Linear Regression - House Price Prediction
- Logistic Regression - Breast Cancer Classification

Vehicle to Infrastructure(V2X) Communication

- Vehicle to Infrastructure communication using MQTT Protocol
- Raspberry Pi was used at Vehicle & Infrastructure end. Cloud MQTT was used as broker.

Soil Moisture Monitoring using Analogue Modulation

- Voltage from the sensor was converted into square and sine waves
- Amplitude Modulation was used to perform modulation, Op-amps (ua-741), 555 Timer, etc were used.

Python Race Game

- A simple python race game was built using Pygame Library.

EDUCATION

The National Institute of Engineering

B.E. Electronics & Communication Major

📅 2020   📍 Mysore, IN

- CGPA (Upto 6 semesters): 9.0

Marimallappa's PU College

📅 2016   📍 Mysore, IN

- Class XII Percentage: 96%

Sadvidya High School

📅 2014   📍 Mysore, IN

- Class X Percentage: 96.64%

CORE COMPETENCES

- Languages - C, C++, Python, Assembly/Embedded C, Verilog Programming
- Hardware - NodeMCU, ESP32/8266 and devkits, Raspberry Pi, Atmel-AVR, Intel Galileo gen2, Arduino
- Tools - Jupyter Notebooks, VS Code, Arduino IDE
- Web - HTML5, CSS3
- Tyro in Firebase, MATLAB, Tensorflow, Keras - Deep Learning & Machine Learning concepts.

COURSES - ONLINE

- Coursera - Neural Networks and Deep Learning by deeplearning.ai (Ongoing) | AWS (Ongoing).
- NPTEL-MOOCs - Basic Electronics | Digital Electronics and Circuits | Analogue Communication | Digital Communication | Antennas & Wave Propagation (Uncertified).
- MITOCW - Signals & Systems | Data Structures (Ongoing) (Uncertified).

LEADERSHIP / VOLUNTEERSHIP

Editor-in-Chief
NIE IEEE STUDENT BRANCH (NISB)

📅 Jun. 2018 - Jun. 2019   📍 Mysore, IN

- Organised BIBLUS, A National Level Technical Paper Presentation Contest sponsored by TEQIP-III
- Released the fifth edition of Newsletter, MANAS (I and II).
- Released the fifth edition of Annual Magazine, JIJNASA.

Resource Manager
NISB

📅 Oct. 2017 - Jun. 2018   📍 Mysore, IN

- Maintained a record of all the pre-post events/Workshops
- Motivated students to attend for the same.

ECE Representative
Dept. of ECE, NIE

📅 Sep. 2016 - Aug. 2017

- Organised and coordinated Department fest (NIECFEST)
- Conducted technical events on Arduino and C++

- As an active memeber of NISB - Won a Largest Outstanding Student Branch Award with team
- Organised & co-ordinated biggest technical fests of NIE - 'Adroit' & 'Ankura'
- Organized over 70+ events, 20+ workshops with the team
- Conducted sessions on Introduction to Python as a part of Women In Engineering weekly meet-ups
- Conducted Basic Electronics Sessions & brain storming Electronika 9.0 as an Execom
- Conducted Arduino Focus Group Sessions.

MANAGEMENT SKILLS

- Content Writing & Editing
- Team Leadership, Organization Leadership
- Event Management & Programming
- Public Speaking
- Sponsorship

COURSE ELECTIVES

- Artificial Intelligence and Neural Networks
- System Verilog

MEMBERSHIP

IEEE - Institute of Electrical and Electronics Engineers
Aug. 2016 - Present