



AVIRAL VERMA

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National Institute of Technology
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EDUCATION

UNDERGRADUATE

National Institute of Technology, Tiruchirappalli

2018-Current

I am currently pursuing electrical and electronics engineering in the institute. My GPA in the first three semesters are mentioned below.

CGPA in 1st semester – 8.56

CGPA in 2nd semester – 8.05

CGPA in 3rd semester – 8.63

SCHOOL

Delhi Public School, Jodhpur

During my school days, I was consistently among top 5% of the class and got 10 CGPA in my 10th standard. In 12th standard, I got 90.6%. I always participated in various Olympiads held during the school days.

RESEARCH EXPERIENCE

National Institute of Technology, Tiruchirappalli

Advisor: Sishaj P. Simon

- Under Sir's guidance, I was trying to develop a fan regulator which could be both controlled manually and with mobile phone using IOT.
- Sir guided me when I was leaning Neural Network.

INTERNSHIP & SUMMER PROJECT

1. Sujai Telesoft, Jodhpur

December 2019

In this internship, I worked in a recently evolved area called hydroponics. In this, I tested various sensors and integrated their working code so that they can work together.

2. Summer Project

May – July 2019

During this period, I worked mainly on embedded programming and developing some IOT related projects. I also worked on various sensors and IC's. YouTube Links are attached with the corresponding projects:-

1. IOT Based Home Automation

In this, I made a device which can control various devices of the house. Its working has been shown in two parts. In first video, the device is used to control the door and the bulb. Door has been connected to a servo motor which is controlled by an IOT based microcontroller. Bulb is connected to relay which is controlled by the same microcontroller.

In second video, I have shown that my device is able to detect the presence of mobile phone if it is in the vicinity of the device.

[Home Automation part 1](#)

[Home Automation part 2](#)

2. Digital signal decoder

In this project, I have developed a decoder which detects a binary pattern which in consequence glow the corresponding led. The signal send was of type 11XX, where X can be 0 or 1.

This signal generation is done using switch. Our decoder is made using gates, flip flop. A mechanical debouncing circuit has been made, to cancel the effect of mechanical bouncing button. The signal generation area is called as base camp and the signal detection area is called as army camp. Signal detection is done by glowing the corresponding led.

[Signal detection process part 1](#)

[Signal detection process part 2](#)

[Signal detection process part 3](#)

3. Water level detector and indication system.

In this, I have made a water level detector using HS-SR04 (ultra-sonic sensor), nodemcu and breadboard. The detector, during testing, was placed at the edge of the tank. Using echo, I measured the distance and send it to nodemcu. The device send the data to MQTT server. The data was displayed on a webpage through a graphical method plotted against time. A small indicator was also there in which it shows that is tank filled, empty or not filled.

[Water level detector](#)

Along with this, I also work on web development. I worked both as a frontend and backend development. All the corresponding projects are mentioned below. All the project's work is uploaded on GITHUB.

1. Calorie Calculator

(Task 1)

This webpage is about a calorie calculator application which can calculate the calorie intake. This ask a user to add the calorie intake of the day. An indicator or a message is displayed if the calorie intake is more than the required. An indicator for the water requirement has been made separately. Also the facility of saving the changes for that day has been made.

[Calorie Calculator](#)

2. Ball Blast

(Task 2)

In this project I developed a game using JavaScript. This game is a replica of [Ball Blast](#) (YouTube Video).

[Ball Blast](#) (webpage link)

3. Google Form like Application

In this project I made an application similar to Google Form. This is very popular application for taking business surveys and personnel surveys. This project was made without using bootstrap, a CSS styling.

[Google Form like Application](#)

4. A chat system

In this project, I have made a Whatsapp like system which can send and receive messages using Ajax. I have kept its name as Netapp. A friend request system (similar to Facebook) is also there.

[Netapp](#)

5. Robotics

I also made various small projects in robotics. It has two folders RMI_basic and RMI_adv.

In RMI_basic it has basic robotics project like controlling of dc motor using PWM techniques, basic coding in Arduino IDE, etc.

In RMI_adv, I have worked on making a radar, using embedded programming to change the property of PWM and some algorithm implementation.

[Robotics](#)

COMMUNITY SERVICE

NATIONAL SERVICE SCHEME

In this, I was involved in various activities like, garbage cleaning, visiting to orphanages, assistant works in eye donation camps, etc.

LANGUAGES

English, Hindi: Native Language.

COMPUTER SKILLS

Programming: C, C++, Python, Embedded skills, JavaScript, php, Ajax, mysql.

Applications: Web development.

HOBBIES

I love music. In music, I like Punjabi, Bollywood a lot.

I love to do outdoor activities like badminton and athletics. I love walking.

I also love coding. In free time I do coding.

Sites – 1) Codeforces - <https://codeforces.com/profile/aviral10092000>

2) Codechef - <https://www.codechef.com/users/jeetaviraljeet>

References

1. Dr. Sishaj P Simon,

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