SHIRSHAK MONDAL

Sophomore at NIT Hamirpur

+91 8617 300 719

shirshakmondaljspbuet@gmail.com

Kolkata,West Bengal

SUMMARY

Motivated and detail-oriented sophomore at NIT Hamirpur pursuing B.Tech in ECE (Dual degree). Demonstrates strong analytical and problem-solving skills through coursework and extracurricular activities. Proven ability to work collaboratively in team settings and manage multiple projects simultaneously. Eager to apply academic knowledge and gain practical experience in Electronics field. Committed to contributing positively to SPEC with a proactive and innovative approach.

EDUCATION

Prafullanagar Vidyamandir
Class 10+2 Pass in Science Stream
2020-2022

NIT Hamirpur
B.Tech in ECE (Dual Degree)
2023-pursuing

SKILLS

- Strong organizational and time-management skills
- Ability to work independently and as part of a team
- Detail-oriented and able to handle multiple tasks simultaneously

TECHNICAL SKILSS

- HTML , CSS
- C++
- C
- MICROPYTHON
- ARDUINO IDE
- THONNY
- ADOBE ILLUSTRATOR
- ADOBE PHOTOSHOP
- FIGMA
- KICAD
- FL STUDIO
- LTSPICE
- LINUX
- PYTHON

EXPERIENCE

PIXONOIDS - HILL'FAIR
Core Club - 2023
Member of Pixonoids club . Contributed in Hill'fair 2023,NIT Hamirpur

PIXONOIDS - NIMBUS
Core Club - 2024
Member of Pixonoids club . Contributed in Nimbus 2024,
NIT Hamirpur

SPEC - ELECTROTHON 6.0
Departmental Society of ECE
Member of SPEC. Volunteered in ELECTROTHON 6.0,
NIT Hamirpur

PROJECTS

OBSTACLE AVOIDANCE BOT
Workshop organised by Robotics society of NIT Hamirpur,I made Obstacle avoidance Bot using Arduino Uno Microcontroller with the help of society members.

LINE FOLLOWING BOT
As an hardware enthusiast I made a Line Folllowing bot using arduino uno microcontroller and IR sensors . Also learnt to use Arduino IDE during this project and helped me to learn some basics of electronis and circuit connection and different electronic components.

PROJECTS

SIMPLE OSCILLOSCOPE

In the summer vacation I dived deep into electronics and hardware . I found that oscilloscope is an essential electronics device . Using Arduino Nano Microcontroller , SSD1306 Oled Display and many components like potentiometer ,diode , resistors I made a simple working Oscilloscope that easily measure electrical signals . During this project I learnt how to program a Display to cast texts and other things.

MINI MACRO CONTROLLER USING RASPBERRY PI PICO

In the summer vacation I dived deep into electronics and hardware . I discovered that computers can be operated more easily using different type of shortcuts . But sometime to shortcut keys are confusing to remember so here comes the Macro where just by pressing one button multiple task can be done . So I made a macro keyboard using Raspberry PI Pico which can work as a HID device . During this project I learnt about Raspberry PI pico microcontroller ,Thonny , a micropython IDE which can be used to program Raspberry PI Pico.

AI visioned spectacles for blind people using ESP32 CAM module

Designed and developed AI-powered vision spectacles for visually impaired individuals using the ESP32-CAM module, Arduino IDE, Postman API, and GPT-4 mini. The project integrates real-time object detection, voice feedback, and advanced AI algorithms to assist with navigation and obstacle avoidance. Successfully implemented APIs to process and relay environmental data, enhancing accessibility and independence for users.

LED pattern generator using NE555 and CD4017

Developed an LED pattern generator using NE555 and CD4017 ICs to create dynamic lighting sequences. Designed and implemented a circuit that utilized the NE555 as a timer to produce clock pulses and the CD4017 as a decade counter to drive LEDs in sequential patterns. The project demonstrated expertise in circuit design, timing mechanisms, and hardware implementation.

WIFI Evil twinning using NodeMCU

Implemented a Wi-Fi Evil Twin attack simulation using NodeMCU to demonstrate cybersecurity vulnerabilities. Configured the NodeMCU to create a rogue access point mimicking legitimate networks, capturing user data for ethical analysis. The project showcased skills in networking protocols, IoT hardware, and ethical hacking techniques to emphasize the importance of network security.

PORTFOLIO

Using HTMLL, CSS I made my portfolio.

https://shirshak0071.github.io/MY-WEBSITE/