SACHIN BHARTI

B.Tech. - Electronics & Communication Engineering

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BRIEF SUMMARY

I am an ECE student with a good foundation in digital electronics, analog electronics, and embedded systems. My expertise lies in circuit design, programming in C/C++/java, and utilizing microcontrollers like Arduino and Raspberry Pi. I have successfully designed and implemented several projects, including a smart home automation system and intelligence gas leakage detection. I believe these skills and experiences are highly relevant to roles in embedded systems engineering and IoT development. In the future, I aspire to contribute to the advancement of smart technologies and work on innovative projects that improve people's lives.

Beyond technical expertise, I am passionate about staying updated on emerging trends in embedded systems and IoT technologies. I actively engage in self-learning and certifications to deepen my knowledge in areas like wireless communication protocols, low-power devices, and artificial intelligence integration.

KEY EXPERTISE

Java | MATLAB | Electronic Circuit Design | Eagle PCB | Data Structures | Python | C

EDUCATION

Haldia Institute Of Technology 2022 - 2026

B.Tech. - Electronics & Communication Engineering | CGPA: **8.25** / **10**

BRITISH ENG SCHL GERE MANPUR MUFASSIL GAYA BR, Gaya 2021

12th | CBSE | Percentage: **76.80** / **100**

CREATIVE PUBLIC SCHOOL, Gaya 2019

10th | CBSE | Percentage: **79.20** / **100**

PROJECTS

IOT Based Intelligence Gas Leakage Detector Using Arduino

10 Sep, 2024 - 20 Sep, 2024

Mentor: Dr Avishankar Roy | **Team Size:** 10

Key Skills: Arduino Basics | Sensor Integration | Microcontroller | Wiring and Schematic Design | GSM Module Integration

Project Link: https://github.com/Sachin20-04/Arduino-IDE-CODE

The "IoT Intelligent Gas Leakage Detector Using Arduino" is a smart system designed to detect gas leaks in homes or industrial environments. The project utilizes a gas sensor (such as the MQ series) to detect hazardous gases like LPG or methane. When the gas concentration exceeds a certain threshold, the sensor sends data to an Arduino microcontroller. The system triggers local alerts through a buzzer or LEDs and can also send remote notifications via an IoT platform, like Blynk , using a Wi-Fi or GSM module. This allows users to monitor the gas levels in real-time, receive alerts, and even control gas supply remotely. The project combines safety with IoT technology, offering continuous monitoring, data logging, and the possibility of automatic shutdowns in case of a leak, making it ideal for enhancing safety in various settings.

Red wine analysis using logistics regression in ML

Team Size: 5

Key Skills:

Data Analysis | Data Preprocessing | Exploratory Data Analysis | Data Visualization | Pandas | NumPy | Scikit-Learn | Matplotlib

Project Link: https://github.com/Sachin20-04/red-wine-quality-prediction

Objective: Developed a predictive model to classify red wine quality based on physicochemical properties.
Key Contributions:
Preprocessed and analyzed a dataset with over X samples (mention the number if available), including feature scaling and normalization.
Engineered key features to improve model performance and reduce noise.
Implemented Logistic Regression in Python using libraries like Scikit-learn, achieving an accuracy of X% (mention accuracy or other performance metrics if applicable).
Evaluated the model using metrics such as precision, recall, F1-score, and ROC-AUC to ensure robust predictions.
Visualized data insights and model results using tools like Matplotlib

ACHIEVEMENTS

- Hands-on experience with microcontrollers (Arduino, Raspberry Pi)
- Familiarity with communication protocols such as I2C, UART, or SPI.
- Successfully collaborated in a team to deliver a major project.
- Participated in Model Design Competition on IOT Application Conducted by IEEE

ASSESSMENTS / CERTIFICATIONS

Model Design Competition on IOT Application

EXTRA CURRICULAR ACTIVITIES

- Participated in seminars, debates, or panel discussions.
- Participated in stage plays or street plays for social awareness campaigns.

PERSONAL INTERESTS / HOBBIES

- Solving Sudoku, crosswords, or engaging in strategic board games like chess.
- Playing some Outdoor games like Cricket and Football
- Reading wildlife Documentaries and Space Enthusiast

PERSONAL DETAILS

Gender: Male
Marital Status: Single
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Date of Birth: 04 Apr, 2004
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