# ABHISHEK KUMAR

+91 7808060981 || imabhi165@gmail.com || LinkedIn || GitHub Portfolio

## SUMMARY OF QUALIFICATIONS

Proficient in **C, C++, Java, and Python** with strong expertise in embedded systems and microcontroller-based development. Experienced in working with **Arduino, STM32, and Raspberry Pi** for IoT, automation, and real-time applications. Skilled in hardware-software integration, troubleshooting, and system optimization. Currently interning at **Avench Systems Pvt. Ltd.,** gaining hands-on exposure to industry-level embedded and IoT solutions. Familiar with DevOps tools **(AWS, Docker, Nginx)** and version control systems **(Git, GitHub, Bitbucket)** for efficient deployment and collaboration.

## EDUCATION

- **National Institute of Electronics and Information Technology (NIELIT), Aurangabad**
  BTech in Electronics System Engineering **| CGPA 8.63** ***Expected May '26***
- **Bihar School Examination Board (BSEB), Patna**
  Higher Secondary (12th) – Science **| 77%** ***April* '21**
- **Bihar School Examination Board (BSEB), Patna**
  Secondary (10th) **| 80%** ***May '19***

## TECHNICAL SKILLS

- **Programming Languages:** C, C++, Java, Python, Bash
- **Data Structures & Algorithms: Arrays, Linked** Lists, Sorting & Searching, Stacks, Queues (using C++)
- **Embedded Systems & Microcontrollers**: Arduino, STM32, Raspberry Pi, FreeRTOS, ARM Cortex-M
- **Development Tools:** VS Code, VIM, Keil µVision, STM32CubeIDE, Proteus, Autodesk Eagle
- **Operating Systems:** Windows, Linux (Ubuntu, Red Hat)
- **DevOps & Cloud Tools:** AWS (EC2, S3, IoT Core), Docker, Linux Shell Scripting, Nginx
- **Version Control**: Git, GitHub, Bitbucket, GitHub Actions (CI/CD basics)

## PROJECT EXPERIENCE

### ➢ Energy Meter Design Using Arduino — **Invg Technology - Remote Internship** *(Nov 2024)*

- Developed a **Smart Energy Meter using Arduino**, integrating **ACS712 current sensor** and **ZMPT101B voltage** sensor for real-time power monitoring.
- Designed an efficient **data acquisition system** to ensure accurate measurement and analysis.
- Implemented **hardware-software integration** for seamless energy tracking and optimization.

### ➢ Student Record Management — **Self-Learning** – *Mar 2024*

- Built a student records system using object-oriented design and data structures in C++.
- Implemented arrays and linked lists to store student data efficiently.
- Developed a menu-driven interface for adding, updating, deleting, and searching student records
  .

### ➢ Power Prediction Using Machine Learning — **NIELIT, Aurangabad** *Currently May '25*

- Developed a **machine learning model** to predict **power consumption and generation** for **renewable energy sources**.
- Utilized **regression algorithms** for accurate forecasting based on **historical energy data**.
- Implemented **data preprocessing, feature engineering, and model optimization** to enhance prediction accuracy.
- Integrated the model with **IoT-based sensors** for real-time data collection and analysis.

### ➢ STM32-Based Weather Station *(I2C + SPI Integration)* — **NIELIT, Aurangabad** *Mar '24*

- Collected real-time **temperature, humidity, and pressure** data using **DHT22** and **BMP280 sensors**.
- Displayed sensor readings on an **SPI-based OLED display** with **I2C communication** for data logging.

## CERTIFICATES

- **Introduction to Embedded C** — *By- Mind Lusters*
- **Computer Network Fundamentals** — *By- Scalar*