BHUNESH SEN

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PROFILE SUMMARY

To enhance professional skills, capabilities & knowledge in an organization which recognizes hard work & trusts me with responsibilities & challenges.

SKILLS

Programming: C++, Python, Basics of Java, Object-Oriented Programming Concepts
Embedded Systems: ATmega328(Arduino Uno), ATmega2560(Arduino Mega)
PCB Design: Schematic design, Layout design, Hardware debugging
Development Tools: Visual Studio Code, Arduino IDE, Ki-CAD, MoreyOS
IoT Protocols & Communication: UART, SPI, I2C, RS-485, IoT Gateway Integration
Soft Skills: Problem-Solving, Team-Collaboration, Time Management, Quick Learning

EDUCATION

Sagar Institute of Science and Technology, Gandhinagar, Bhopal
B.Tech in Electronics and Communication Engineering | 2021 – 2025

D. P. Sanskar Public School, Bhopal (M.P.)
Senior Secondary (MP Board), PCM | 2020 – 2021

Christ Memorial Sr. Sec School, Bhopal (M.P.)
Secondary (CBSE) | 2018 – 2019

WORK EXPERIENCE

DRMZ-SYSTEM INNOVATIONS PVT. LTD. BHOPAL(MP) | **RESEARCH INTERN** | (Aug-2024 -Mar-2025)

- Gained hands-on experience in **designing, testing, and prototyping** embedded systems and PCB layouts for industrial applications.
- Developed a strong understanding of **firmware development and debugging** for ATmega microcontrollers using **C++ and Embedded C**.
- Learned to work with **IoT protocols (I2C, UART, SPI)** to enable **seamless device integration, remote connectivity, and automation**.
- Explored the integration of **Morey_OS** for **real-time processing and task optimization** in embedded solutions.
- Enhanced **team collaboration skills** by working on **industrial automation projects**, contributing to **custom PCB designs and embedded communication systems**.

PROJECTS

Real-Time Monitoring System for Industrial Cooling

Technologies: ATmega328P, C++, Sensors (Temperature, Pressure, Flow)

- Designed and developed **real-time monitoring system** for industrial cooling systems(Heat Exchanger).

- Enabled **predictive maintenance**, reducing downtime and eliminating the need for periodic checks.
- Developed **firmware for embedded systems** to process and transmit sensor data.
- Implemented **real-time data updates** to prevent overheating and enhance cooler efficiency and lifespan.

Real-Time Clock with RF Communication & Buzzer

Technologies: ATmega328P, DS3231, 74HC595, Morey_OS

- Developed a real-time clock (RTC) system with a buzzer for notifications.
- Integrated RF communication for synchronization with other automated devices.
- Utilized Morey_OS for efficient task scheduling and low-power operation.

Smart Home Automation System

Technologies: ATmega328P, ESP32, ESP01, RF Modules

- Designed and developed an automation system integrating sensors and RF communication.
- Automated lighting and curtain systems based on occupancy and light intensity.
- Implemented automated airflow regulation based on temperature variations to enhance energy efficiency and comfort.

CERTIFICATIONS & TRAININGS

- Attended a 7-day workshop on **Python Programming** at SISTec-GN, Bhopal
- Completed an online certification course on "**Introduction to C++**" by Udemy (2024)
- Attended a 11-day workshop on **Web Development(**HTML, CSS, JavaScript**)** at SISTec-GN

ACHIEVEMENTS & EXTRA-CURRICULAR ACTIVITIES

- **1st Position** in Poster Making Competition *"Abhivyakti 2022"* at SISTec-GN.
- Participated in **State-Level Project Exhibition – 10th Bhopal Vigyan Mela 2023**.
- Co-coordinated **Sagar Sahitya 2021** – A Literary Event at SISTec-GN.

PERSONAL INTEREST

- Embedded Systems & IoT Innovations
- Sketching
- Spiritual Reading & Knowledge