

# Ashish M. Muley

Electrical & Instrumentation Engineer.  
SPI - Intools/ Admin | IoT System

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Portfolio: [Ashish-portfolio.in](#)

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## Professional Summary: Instrumentation Design Engineer

Jan 2024 – Present

Monarch Techno Engineering Solution's Pvt. Ltd. (CBD Belapur, Navi Mumbai, Maharashtra, India)

**Result-Driven** expertise in SPI Intools and Admin, skilled in instrumentation design, database management, project execution, and training cross-functional teams. Proficient in creating instrument indexes, I/O lists, datasheets, wiring/loop diagrams, hook-up drawings, and managing SPI projects, user access, backups, and reports. Committed to delivering accurate, standards-compliant documentation and enabling efficient multi-disciplinary project workflows.

## Project Experience:

1. ADNOC - Ruwais NGL Train 4: Jan 2024 - Sept 2024  
*Software: SPI-Intools (Version 13.1)*

- Loop & Tag Creation based on vendor documents and Instrument Index.
- Instrument Specification Sheet preparation
- Wiring connection diagrams between entities using SPI Wiring Module.
- Loop Diagram modification & generation.
- Preparation of interconnection diagrams.
- Process & pneumatic hook-up diagram development.
- Creation & customization of Engineering Data Editor (EDE) and Browser.
- Extraction of Instrument Index, Cable Schedule, JB Schedule, I/O List, Alarm List via EDE & Import/PSR.

2. Technip Energies - Polypropylene Plant [Team Lead] Mar 2024 – Nov 2024  
*Software: SPI Intools (Version 11.0)*

- Loop & Tag creation based on vendor documents & Instrument Index.
- Wiring connection diagrams using SPI Wiring Module.
- Loop Diagram modification & generation.
- Interconnection diagram preparation.
- Engineering Data Editor (EDE) creation and customization.
- Template & symbol creation/modification using Enhanced Smart Loop and Symbol Editor

3. ADNOC - Sulphur Granulation Plant-3 April 2024 – Nov 2024  
*Software: SPI Intools (Version 13.1)*

- Instrument Specification Sheet preparation.
- Wiring connection diagram development using SPI Wiring Module.
- Loop Diagram generation & modification.
- Preparation of process & pneumatic hook-up diagrams.

## Expertise:

- Instrument Index & I/O List Management
- Instrument Datasheets & Specifications Preparation
- Wiring & Loop Diagram Generation (Conventional & Fieldbus/FF)
- Instrument Hook-Up Diagrams (Process & Pneumatic)
- SPI Intools/ Administration & Project Setup
- User Access Management, Backups
- Report Generation & Template Management
- Procurement Support & Vendor Data Compliance
- Technical Support, Training & Assistance to Engineering Teams
- Project Documentation & Lifecycle Management

## R&D Development Projects (Embedded, IoT, Robotics):

*Below Major projects are of Freelancing*

(Ashish-Portfolio.in)

- AI-Driven Smart Traffic Control System
- E-Bike Motor Controller with IoT Dashboard
- Hydroponic Farming Automation System
- RS485/RS232 Multi-Sensor Industrial IoT Node
- Quadcopter Drone with STM32 Flight Controller
- Smart Spraying Rover for Agriculture
- Regenerative Electric Bicycle
- LoRa-Based Remote Weather Station

## Embedded IoT, Robotics Skills:

Embedded & Hardware	Programming & Software	AI & Automation	Microcontrollers & Platforms
<ul style="list-style-type: none"><li>• PCB Design</li><li>• Battery Pack Design</li><li>• HMI Interfaces</li><li>• Hardware Testing Validation</li><li>• Soldering and Assembly</li><li>• Circuit Simulation</li></ul>	<ul style="list-style-type: none"><li>• Embedded C</li><li>• VS Code</li><li>• PlatformIO</li><li>• Arduino IDE</li><li>• RTOS (FreeRTOS / Zephyr)</li><li>• MATLAB / Simulink</li></ul>	<ul style="list-style-type: none"><li>• N8N Automation</li><li>• Firebase</li><li>• UiPath AI</li><li>• Computer Vision</li><li>• OpenCV</li><li>• MQTT</li></ul>	<ul style="list-style-type: none"><li>• Arduino Series</li><li>• ESP32 Series</li><li>• ESP8266</li><li>• STM32</li><li>• Raspberry Pi</li><li>• PIC16/18</li></ul>

## Education:

### • Maharashtra Institute of Technology

*Bachelor of Technology [B.Tech] in Electrical Engineering*

*CGPA : 7.14*

*Equivalent Percentage 71.4%*

*Pass Out – 2024*

## Certifications:

1. PLC & Industrial Automation
2. Electric Hybrid Vehicle
3. Project Management with Agentic AI (IIT Patna)
4. KiCAD, PCB Design
5. MATLAB Simulink Certified
6. Be10x Prompt Engineer in AI

## Awards & Achievements:

### 1. Technical/ Engineering Achievements

- Gold Medalist – State-Level Avishkar Competition in Research and Development
- Gold Medalist – Robotics Innovation Challenge
- Gold Medalist – National Robotics League (College Level)
- Gold Medalist – Embedded Systems Mini Project Expo
- Best Performer – Industrial Automation Workshop

### 2. Sports/ Co-Curricular Achievements

- Gold Medal – 100m Sprint (District Level)
- Gold Medal – 200m Running (District Level)
- Silver Medal – Football Tournament (NSO / Inter-College)
- Runner-Up – Badminton Singles (Inter-Department)
- Runner-Up – Kabaddi Tournament (College Level)

### 3. Leadership / Recognition

- Recognized as Young Innovator in Embedded Systems
- Guest Speaker – Battery Management & Embedded Workshop
- Appreciation Award – Student Technical Mentorship Program
- Best Volunteer – Technical Festival Coordination

**I hereby declare that all the above-furnished details are true to the best of my knowledge.**