

Ashish M. Muley

Electrical & Instrumentation Engineer.

SPI - Intools/ Admin | IoT System

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Portfolio: [Ashish-portfolio.in](https://ashish-portfolio.in)

LinkedIn: Ashsih-LinkedIn.in

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:

- 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.
- 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
- 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):

(Ashish-Portfolio.in)

Below Major projects are of Freelancing

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

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.