PRAYAG GARG

Automation & Project Engineer | Industry 4.0 | Smart Manufacturing | Process Excellence

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PROFESSIONAL SUMMARY

Results-driven Automation & Project Engineer with 4+ years of experience delivering Industry 4.0 and smart manufacturing solutions. Expert in developing middleware software (C#, Python) integrating PLC, SCADA, and IoT systems with enterprise databases for real-time production monitoring. Proven track record in implementing OCR, Vision Inspection, AMR robots, and full-plant traceability systems that enhance operational efficiency, reduce downtime by 40%, and improve customer satisfaction. Strong project execution skills with expertise in assembly line installation, supplier coordination, and automation system integration.

EXPERIENCE

Automation Engineer | Sona Comstar | Mar 2024 – Present | Gurugram

- Spearheaded end-to-end automation initiatives integrating AMR robots, OCR systems, vision inspection, and welding inspection stations, increasing throughput by **35%** and improving first-pass inspection accuracy by **30%**
- Architected and deployed a full-scale plant traceability platform using SQL, C#, and Python, enabling real-time part-level tracking and analytics, reducing search/diagnostics time by **90%**
- Built robust middleware applications for PLC-to-database communication, automating production control and eliminating **95%** of manual data entry, reducing cycle time variation by **20%**
- Enhanced customer confidence and audit readiness by delivering transparent, data-driven traceability, reducing customer complaints and audit NCs by **40%**
- Installed, commissioned, and optimized automated assembly lines for new product launches, improving productivity by **25%** and increasing equipment uptime to **98%**
- Implemented PLC–SCADA–IoT integration for unified monitoring and automated reporting, cutting data collection time by **80%**
- Led automation line relocation and shifting projects with **100% production continuity** and zero downtime during transitions
- Worked cross-functionally to deploy AR/VR-based digital twin simulations and operator training, reducing training time by **50%** and improving process adherence

Automation & Project Engineer | Ascent Business Technology | Jan 2022 – Mar 2024 | Gurugram

- Executed automation and IoT integration projects bridging machine data with enterprise databases.
- Developed middleware applications in C# and Python enabling IoT devices and PLCs to communicate directly with SQL and cloud services.
- Created software solutions for sending commands to PLCs and controlling production line operations.
- Implemented SCADA dashboards for live process visualization and performance tracking.
- Coordinated with suppliers for automation system procurement, testing, and integration.
- Documented project milestones, performed quality audits, and ensured on-time, budget-compliant delivery.

Automation Trainee | Ducat | Jun 2021 – Dec 2021 | Gurugram

- Supported PLC communication and IoT integration for small-scale automation prototypes.
- Assisted in development of SCADA simulation modules and IoT-enabled process visualization.
- Conducted troubleshooting and testing of machine communication interfaces.

KEY PROJECTS

- AMR Implementation – Automated material logistics reducing manual handling by 40%.

- OCR & Vision Inspection System – Deployed AI-powered OCR and vision systems for defect detection and code recognition.

- Welding Inspection Automation – Introduced automated weld quality validation using digital inspection cameras.

- Plant Traceability Platform – Built comprehensive software ecosystem capturing every manufactured part's lifecycle data for enhanced transparency.

- Assembly Line Setup – Designed, installed, and optimized assembly lines for new product introductions with full automation integration.

- Smart Manufacturing Dashboard – Developed Angular + Spring Boot dashboard for live OEE, defect tracking, and production monitoring.

TECHNICAL SKILLS

- Programming: C#, Python, Java

- Web: Angular, Spring Boot

- Databases: SQL, PostgreSQL

- Automation: PLC Integration (Siemens, Allen-Bradley, Schneider), SCADA, IoT, AMR Robots

- Industry 4.0: Vision Systems, OCR, Welding Inspection Automation

- Software: Middleware, API Integration, Real-time Data Processing

- Visualization & Reporting: Power BI, Excel, PowerPoint, AR/VR Tools, Digital Twin Simulation

- Project Management: Assembly Line Setup, Supplier Coordination, Process Optimization - Manufacturing: Traceability Systems, Production Analytics

EDUCATION

- MCA – Gurugram University (2023–2025)

- B.Tech, Mechanical Engineering – DCRUST, Sonipat (2016–2020)

- 12th CBSE – Sidheshwar Public School, Gurugram (2015–2016) - 10th CBSE – Sidheshwar Public School, Gurugram (2013–2014)

ACHIEVEMENTS

- GATE 2022 Qualified – Demonstrated strong analytical and problem-solving ability.

- Developed full-plant traceability improving data visibility and customer confidence.

- Recognized for successful automation and supplier coordination execution.

- Delivered automation projects with zero production downtime and cost efficiency.

LANGUAGES

English – Proficient | Hindi – Native