

ALI MOHAMMADI NASRABADI

Yazd, Iran

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Electrical and Automation Engineer with experience in industrial control system design, equipment manufacturing, engineering software development, and AI applications in industry. Skilled in electrical and electromechanical system design, software development, automation equipment, and artificial intelligence. Passionate about applying machine learning, computer vision, and intelligent automation in industrial settings. Capable of combining electrical, mechanical, and software engineering knowledge to design and implement advanced, efficient systems.

WORK EXPERIENCE

Manufacturing Engineer (Automation & Electrical Systems)

Pishgaman Behsaz Ravane, Yazd, Iran

03/2023 – 03/2026

- Performed end-to-end manufacturing of mechanical and electromechanical components, including design, machining, assembly, and production.
- Designed mechanical parts and tooling with consideration for material selection, tolerances, and manufacturability.
- Manufactured components using manual lathes, CNC machines, and other machining equipment.
- Designed, built, and wired industrial electrical enclosures in accordance with safety and industrial standards.
- Developed, programmed, and commissioned control automation systems for manufacturing processes.
- Integrated electrical, mechanical, and control systems into complete production solutions.
- Troubleshoot and resolved electrical, automation, and manufacturing issues on the shop floor.
- Analyzed production and system issues to identify root causes and implement corrective actions for electrical, mechanical, and electrical problems.
- Collaborated with production, maintenance, and engineering teams to support process reliability and efficiency.
- Participated in continuous improvement activities across manufacturing workflows.

Industrial Electrical Engineer

Bargh O Noor Esatis, Yazd, Iran

02/2021– 02/2023

- Designed, installed, and maintained industrial electrical systems for manufacturing environments, ensuring 100% operational uptime during routine production hours.
- Developed electrical schematics and wiring diagrams for power distribution, control panels, and automation systems - used by maintenance teams as primary reference documentation.
- Installed, wired, and commissioned electrical panels, motor drives, sensors, and industrial equipment - from component selection to final testing.
- Programmed, modified, and troubleshoot PLC-based control systems, reducing fault response time by approximately 20% through systematic debugging and code optimization.
- Integrated electrical components with mechanical systems, enabling seamless communication between sensors, drives, and moving machinery.
- Diagnosed and resolved electrical faults, minimizing production downtime and maintaining operational safety.
- Ensured compliance with electrical standards, safety regulations, and industrial best practices.
- Supported production and maintenance teams during installations, upgrades, and emergency breakdowns – recognized as a key technical resource for critical situations.

EDUCATIONS

MSc in Artificial Intelligence & Robotics Engineering

Science & Arts University, Yazd, Iran
09/2025 – Present

BSc in Computer Software Engineering

Technical and Vocational University, Yazd, Iran
09/2023 – 08/2025

Associate Degree in Computer Engineering

Technical and Vocational University, Yazd, Iran
09/2021 – 08/2023

TECHNICAL SKILLS

- Automation: PLC, HMI, Ladder Logic, industrial sensors, VFD drives, control panels
- CAD & Design: AutoCAD, electrical schematics, wiring diagrams, 3D design software (SolidWorks, Inventor)
- Programming: Python (automation, data analysis, AI), C++ (application development, algorithm implementation), MATLAB (modeling, control systems).
- Machining: CNC, turning and milling
- AI & Robotics: Machine learning, computer vision, intelligent automation, neural networks

SELECTED PROJECTS

Continuous Production Process Setup for Oil Purification Machinery — Behsaz Ravaneh, Ashkezar

Designed and optimized the production process utilizing modern machining to increase manufacturing precision, reduce production time, and improve product quality.

Design & Development of High-Volume Industrial Oil Purifier (12,000 L/h) — Behsaz Ravaneh, Ashkezar

Designed electrical and control systems, selected equipment, and optimized device performance.

Industrial Oil Contamination Reduction System to Below NAS Class 5 — Behsaz Ravaneh, Ashkezar

Designed and developed a filtration and quality control system to achieve cleanliness standards below NAS 5 and enhance industrial equipment reliability.

2D Visual Navigation System for an Airship — University of Science and Art, Yazd

Designed and implemented machine vision and image processing algorithms for position estimation and 2D guidance of an airship.

University Course Scheduling System — University of Science and Art, Yazd

Designed and implemented scheduling software to optimize class allocation, professor assignments, and course timetables, minimizing conflicts.

Overhaul & Modernization of Textile Machinery — Simin Aliaf, Mehriz (Bargh & Noor Isatis, Ashkezar)

Designed and executed improvements to power and control systems, enhancing performance and reliability.

Industrial Data Network Implementation — Saghand Water Treatment Plant, Ardakan (Bargh & Noor Isatis, Ashkezar)

Developed communication infrastructure, performed network troubleshooting, and improved stability of industrial equipment communications.

Glove Production Line Commissioning & Troubleshooting — Dastkesh Yazd, Yazd (Bargh & Noor Isatis, Ashkezar)

Installed, commissioned, troubleshot, and optimized production line equipment and control systems.

LANGUAGES

- English – Advanced (C1)

- Persian – Fluent