

Ibrahim Ali Ghanim

Mechatronics Engineer | Industrial Automation & Control

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SUMMARY

Top 10% Mechatronics Engineering graduate (9th of 90) focused on industrial automation, PLC programming, SCADA/HMI, and system integration. Hands-on experience with Siemens TIA Portal, Ignition, WinCC, Factory I/O, Node-RED, Modbus TCP, instrumentation, and Python-based industrial analytics. Seeking junior Automation, PLC, SCADA, Control, or Commissioning roles.

PROFESSIONAL EXPERIENCE

Instrumentation & Maintenance Trainee

06/2026 – 07/2026

Alchemy Scientific

Calibrated and tested pH, ORP, EC, TDS, temperature, turbidity, and photometer instruments, including basic troubleshooting, probe care, and battery replacement.

SCADA & Electrical Systems Intern

07/2025 – 08/2025

Ministry of Electricity - Rusafa Directorate

Observed SCADA control-room operations, alarm response, server infrastructure, electrical control panels, and field-to-control-room system integration.

PROJECTS

Smart Conveyor Control & SCADA System [🔗](#)

Ignition SCADA Project

- Built an integrated conveyor control and monitoring system using Ignition Vision, Modbus TCP, Node-RED, and Factory I/O, with Auto/Manual modes, alarms, historian, production logging, fault handling, security, and reusable UDT/templates. Implemented START/STOP/RESET/E-STOP logic, watchdog monitoring, latched faults, alarm acknowledgement, and historical trends.

PetroSafe AI - Industrial Tank Safety & Fault Detection [🔗](#)

Independent Industrial Automation Project

- Developed an industrial tank safety prototype using Factory I/O, Node-RED, Modbus TCP, and Python/FastAPI, with Process Trip logic, fault latching, leak/blockage detection, event logging, and AI-assisted anomaly detection.

Multi-Station Tank & Pump Automation System [🔗](#)

Industrial Process Simulation

- Designed a simulated 16-tank, four-substation control system integrating PLC/HMI control, Factory I/O, Node-RED, Modbus, automatic pumping logic, alarms, leak detection, and AI-assisted operational analysis.

SKILLS

Automation & Control

Siemens TIA Portal
PLC Programming
Ladder Logic
Modbus TCP
Factory I/O
Industrial Control

SCADA & HMI

Ignition 8.3
Ignition Vision
WinCC HMI
Node-RED
Alarm Management
Tag Historian
OPC UA

Instrumentation & Supporting Technologies

Instrumentation Fundamentals
Electrical Control
Python
Industrial AI
Robotics Programming

EDUCATION

B.Sc. in Mechatronics Engineering

11/2022 – 06/2026

University of Baghdad - Al-Khwarizmi College of Engineering
Ranked 9th out of 90 Mechatronics Engineering students (Top 10% of the cohort).

CERTIFICATES

Ignition 8.3 Credential

Inductive University | 2026

One Million Prompters

Dubai Future Foundation | 2026

LANGUAGES

Arabic

Native

English

Intermediate