

**Mohamed Gamal Eltantawi**  
**Industrial Automation Engineer**

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## PROFESSIONAL SUMMARY

Industrial Automation Engineer with 2 years of experience in **PLC, SCADA, DCS, ICSS, and SCMS** systems across **Oil & Gas, Steel and Cement industries**. Experienced in engineering, **FAT, IFAT, SAT, and commissioning of Siemens PCS 7 and S7 platforms**. Strong knowledge of **IIoT integration, IEC 61850, industrial communication protocols**, and control system integration. Proven ability to support large-scale automation projects, improve system reliability, and ensure compliance with international standards.

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## CORE TECHNICAL SKILLS

### Automation Platforms:

Siemens PCS 7, SIMATIC Manager, TIA Portal, S7-300, S7-400, S7-1200, S7-1500, ET200SP, ET200SP HA.

### SCADA & HMI:

WinCC Explorer V7, V8, WinCC Unified, Ignition SCADA, AVEVA Intouch Platform, InduSoft

### Industrial Protocols:

IEC 61850, Modbus RTU, TCP, PROFINET, PROFIBUS, OPC UA, MQTT

### Safety & Control Systems:

ICSS, SCMS, ESD Systems, Cause & Effect Matrix, Interlocks, Trip Logic

### Testing & Commissioning:

FAT, IFAT, SAT, Loop Checking, I/O Testing, Functional Testing, Signal Validation

### Electrical Systems:

MV Switchgear (MVS), LV Switchgear (LVS), Protection Relays, MCC Panels, VFD Integration

### Engineering Tools:

Microsoft Excel (Advanced), Microsoft Word, PowerPoint, Node-RED

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## PROFESSIONAL EXPERIENCE

### External Assignment – Automation Engineer

**Siemens Energy, UAE | Apr 2025 – Present**

#### **Salt Dome Project (Oil & Gas)**

- Engineered and programmed PCS 7 control logic for ICSS systems supporting critical oil & gas operations.
- Participated in Hardware FAT covering 2,000+ I/O signals across ICSS, SCMS, and ESD subsystems.

- Executed IFAT activities integrating SCMS and ICSS subsystems.
  - Configured and validated ESD logic including trip conditions, shutdown sequences, and safety interlocks in accordance with Cause & Effect Matrix documentation.
  - Performed SAT and commissioning activities for MVSW and LVSW systems using IEC 61850 communication.
  - Tested and validated protection relays, breakers, and interlock logic to ensure 100% signal integrity.
  - Developed a Data Concentrator integrating LVSW with SCMS and ICSS, improving data exchange reliability by approximately 100%.
  - Conducted site surveys across SHAH, HABSHAN, and ASAB facilities supporting field engineering documentation.
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## **Automation Engineer**

**Imhosys | Sep 2024 – Present**

### **Sinai Cement Grey Plant – PCS 7 Upgrade Project**

- Supported migration from Allen-Bradley FLSmidt to Siemens PCS 7 DCS for a large-scale cement production line.
- Configured S7-400 and ET200SP HA systems covering 1000+ I/O points.
- Developed CFC-based control logic and WinCC SCADA interfaces.
- Contributed to Phase-3 network architecture design and automation material selection.

### **Zinc Oxide Production Plant – EAFD Recycling**

- Developed automation software using Siemens S7-1500 PLC for continuous production processes.
- Designed WinCC V8.0 SCADA system monitoring 3000+ process variables.
- Participated in FAT, IFAT, and SAT reducing commissioning delays by supporting rapid troubleshooting.
- Improved alarm handling structure and system diagnostics.

### **Sococim Cement Plant – Senegal**

- Supported SAT and commissioning for S7-1500-based automation system.
  - Assisted in AVEVA SCADA configuration and tag database development.
  - Performed loop checks and functional testing under senior supervision.
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## **EDUCATION**

### **Bachelor of Engineering (B.Sc.) – Electrical Engineering**

**Mansoura University, Faculty of Engineering | Jun 2024**

- Major: Electrical Power s Machines
- Cumulative Grade: Very Good (82.86%) Graduation Project:

### **Automation of Power Distribution Grid for Smart Cities — Grade: Excellent**

- Designed residential electrical network infrastructure.

- Integrated on-grid solar PV systems.
  - Developed IIoT monitoring solution using Node-RED & OPC UA.
  - Built SCADA monitoring system using Ignition platform.
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## TRAINING & CERTIFICATIONS

- **ADNOC H2S Training** – ATA UAE | Aug 2025
  - **ADNOC HSE Induction** – ATA UAE | Aug 2025
  - **Ignition SCADA** – Inductive Automation University (Jul 2024)
  - **Schneider Electric University** – 60 Electrical Engineering Courses (2024)
  - **PLC Advanced Programming** – HA Consulting Group, Egypt | Jul–Sep 2023
  - **Classic Control's Basic PLC** – HA Consulting Group, Egypt | Jan–Mar 2022
  - **Project Management Fundamentals** – American Chamber of Commerce (Oct 2022)
  - **IIoT (Node-RED, OPC-UA, MQTT, MySQL)** – Code and Compile (Nov 2023 – Feb 2024)
  - **Electrical Distribution Diploma** – Online Experts (Jul–Oct 2022)
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## ADDITIONAL TECHNICAL TOOLS

- **PLC & DCS:** TIA Portal, SIMATIC Manager, PCS 7
  - **SCADA & HMI:** WinCC, Ignition, InduSoft, AVEVA
  - **IIoT & Communication:** OPC-UA, MQTT, Node-RED, Modbus, Profibus, Profinet, IEC61850
  - **Other:** ICDL (Word, Excel, PowerPoint), Remote Collaboration Tools
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## SOFT SKILLS

- Strong analytical and problem-solving capabilities
  - Structured troubleshooting methodology
  - Cross-functional collaboration with electrical, instrumentation, and mechanical teams
  - Effective communication with clients and multinational teams
  - Commissioning and site coordination skills
  - Technical documentation and reporting
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## LANGUAGES

- Arabic: Native
  - English: Upper-Intermediate (B2)
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## REFERENCES

Available upon request

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