Omar Jalel

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ABOUT ME

Industrial Automation Engineer currently working at Methode Electronics in Malta. I have hands-on experience in Siemens PLC programming, machine commissioning, industrial networks, and IIoT integration.
Ambitious, motivated and passionate about designing smarter, more connected automated industrial systems.

WORK EXPERIENCE

🏢 *Methode Electronics* – Birkirkara, Malta

Name of unit or department: Design Electric Département - **Business or sector:** Manufacturing

Industrial Automation Engineer

[18 Mar 2024 – Current]

Manufacturing of new automated machines:
  • Design and document electrical schematics and control panels.
  • Electrical panel wiring: PLCs, Sensors, Emergencies & Safety components, MVK, IO Links, HMIs, VFDs, Valves
  • Tia portal Programming for Simple stations machines and Turn Tables using a robust standardized Tia Portal templates
  • HMI Screens Programming under WinCC.
  • Collaborating with Cross-Functional teams including Manufacturing engineering, Maintenance, IT Department.
  • Provide the necessary training for operators and technical instruction for the maintenance team.
  • Ensure that automation systems comply with the safety standards.

Improvement and maintenance of existing automated machines:
  • Commissioning and integration of additional equipment or automated machines within existing industrial lines ensuring seamless integration with existing infrastructure.
  • Enhance and upgrade Existing automation Program to reduce downtimes and production cycle time.
  • Online monitoring and troubleshooting of automated systems.

Projects
  • BMW Line Project - Egypt
  • RENAULT XDD Riveting Machine
  • RENAULT XDD Micro resistance Testing Machine
  • RENAULT HHN
  • Punch Vitesco Vision Jigs
  • Porsche Sensor and RSU machines
  • R&D Project - Implement RFID System to access machines functionalities connected through PLC

Skills acquired (Tia Portal & WinCC Programming, Siemens Project Server, PROFINET devices / Networks, Tia Portal Safety Blocs, Safety Components, Jaka Robots, Siemens Simotion, Servo Drives, Sensors & Actuator commissioning, High Speed Counters, PCSchematic Electric Diagrams, PLC Remote access, Basic, Comfort and unified HMI Panels)

🏢 *Discvovery Informatique SA* – Ariana, Tunisia

Name of unit or department: R&D Département - **Business or sector:** Information and communication

Industrial Integration Consultant

[2 Feb 2022 – 15 Mar 2024]

- Study and demonstrate IIOT tools and technologies on behalf of several industrial clients
- Participate in the study of new technologies and documentation within the R&D department
- Participate in the tasks of demos, studies, implementations for the implementation of an MES (part integration with machines and control units)
- Identify IIOT communication points before the integration phase of an MES: Technical feasibility, choice of equipment, budget estimate, etc.
- Develop a communication gateway to monitor and collect machine variables in real time via several industrial protocols
- Improve the gateway to be able to archive collected data and operate in multi-node mode
- **Skills acquired** (Docker, Apache Kafka, Curl, Linux, Git, TwinCAT, Beckhoff PLC, OPC UA, Modbus TCP, ADS/AMS, Tia Portal, PLCSIM Advanced, Siemens S7, Factory IO, VC Components, RS Logix, MQTT)

🏛 *APBS Avicenna Private Business School* – Tunis, Tunisia

Name of unit or department: IT Helpdesk - **Business or sector:** Education

IT and Maintenance support

[17 Sep 2021 – 1 Feb 2022]

- Maintain and adjust computer and electronic equipment
- Monitor online sessions and conferences
- Participate in the wiring and installation of various equipment (cameras, touch screens …)
- Develop a solution for mixing between multiple cameras and multiple audio sources
- Skills acquired (Zoom, Surveillance cameras, IT Networking)

EDUCATION AND TRAINING

Professional master's in industrial systems Control

University of Carthage - ISSAT Mateur [15 Sep 2019 – 15 Jun 2021]

City: Bizerte | **Country:** Tunisia | **Website:** https://ucar.rnu.tn/ | **Level in EQF:** EQF level 7

Applied degree in automation of industrial systems (Bachelor's degree)

University of Carthage - ISSAT Mateur [15 Sep 2016 – 15 Jun 2019]

City: Bizerte | **Country:** Tunisia | **Website:** https://ucar.rnu.tn/ | **Level in EQF:** EQF level 6

CERTIFICATIONS

[HTL Automation - Service et Formation, 6 Jan 2022]
Siemens PLC Certificate Level 3 Skills: PLC Siemens, GSD concepts, PLC program for drive communication, Rotary Encoder, Variable Speed Drivers, Wincc Scripts, Electrical & Mechanical Installation Standards, Fault Diagnosis & Network Diagnostics ·

Mode of learning: Presential

[HTL Automation - Service et Formation, 12 Dec 2021]
Siemens PLC Certificate Level 1&2 Skills: PLC Siemens, Profibus & Profinet Communication, Diagnostics of Siemens PLCs, Analog I/O Programming · WinCC Basic, WinCC Advanced, PID Control, Incremental and absolute encoders, PWM (Pulse Width Modulation) Signal processing, G120C PN Variable speed drive, Scripting (Global Scripts)

Mode of learning: Presential

[Microsoft, 7 Feb 2023]
Microsoft Certified: Azure AI Fundamentals Skills: SQL, DevOps, Azure Bot Services, Azure Machine Learning, Cognitive Services

Mode of learning: Project based

[Microsoft, 6 Jan 2023]
Microsoft Certified: Azure Fundamentals Skills: DevOps, Azure, Cloud Data, Cloud Networking, Cloud Security, Cloud Services, Cloud Storage, Virtualization

Mode of learning: Project based

[Sololearn, 13 Apr 2021]
HTML Certificate

Mode of learning: Online

[Sololearn, 22 Apr 2021]
PHP Certificate

Mode of learning: Online

LANGUAGE SKILLS

Mother tongue(s): Arabic

Other language(s):

English
LISTENING C1 **READING** B2 **WRITING** B1
SPOKEN PRODUCTION B1 **SPOKEN INTERACTION** B2

French
LISTENING B2 **READING** C1 **WRITING** C1
SPOKEN PRODUCTION B2 **SPOKEN INTERACTION** B2

German
LISTENING A1 **READING** A1 **WRITING** A2
SPOKEN PRODUCTION A1 **SPOKEN INTERACTION** A2

Levels: A1 and A2: Basic user; B1 and B2: Independent user; C1 and C2: Proficient user

SKILLS

Microsoft Office / Linux (Terminal Commands, Bash/Shell) / Microsoft Excel / Microsoft Word / Microsoft Powerpoint / Devops: Docker, Jenkins / DevOPS (basic level) / Portal Azure / Cloud - Azure / Tia portal / Apache Kafka (Streams, Connect) / plc programming in siemens / Raspberry Pi y Arduino / Html, Java, CSS / NODE red / MySQL, SQL, SQLite, PostgreSQL / OPC/OPC-UA / Industrial protocols (Modbus RTU and TCP) / Profinet IO / NI LabVIEW 2019 / STM32 CubeMX / Matlab/Simulik / KIEL/PROTEUS / Software Fluidsim / S7-PLCSIM / SIEMENS PLC / Beckhoff TwinCAT 3 / Mqtt Brokers / Basic Electrical Wiring Connection/ Installation / PLC programming, Tinkering with Arduino, Panel Designing, IOT

CREATIVE WORKS

Siemens S7 1500 Digital Assembly Simulation & OPC UA connectivity with LabVIEW Integration of Siemens S7-1500 PLC with LabVIEW supervision using OPC UA. The project demonstrates real-time data exchange, digital assembly simulation, and industrial supervision.

Link: https://omarjalel.github.io/projects/siemens-opc-labview.html

Data Integration between MQTT broker, Modbus TCP and Azure Cloud (IoT Hub)

Link: https://omarjalel.github.io/projects/Azure-IOT-MQTT-Modbus.html

Simulating Robot Operating System on Ubuntu VM (Azure VM) - Data forward to NODE-RED Deploy a Robot Operating System (ROS) simulation environment under Ubuntu OS with Gazebo and the ROS-Noetic package, all hosted Microsoft Azure Cloud VM

Link: https://omarjalel.github.io/projects/ROS-NODE-RED.html

Testing IIoT Gateway - Apache StreamPipes with Kafka Broker Vehicle simulator runs on a Raspberry Pi using a virtual CAN network, streaming telemetry data via MQTT through Apache StreamPipes and Kafka for real-time visualization and analysis

Link: https://omarjalel.github.io/projects/ApacheStreamPipes-MQTT-Kafka.html

3D virtual factory simulation with Factory IO and Siemens PLC

Link: https://omarjalel.github.io/projects/FactoryIO-TiaPortal.html

HOBBIES AND INTERESTS

Chess game

Editing videos

Technology News

DRIVING LICENCE

Driving Licence: B