

Mustafa Sigad

Automation Engineer

PERSONAL DETAILS

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PERSONAL PROFILE

PLC Commissioning Engineer with extensive experience in designing, programming, and commissioning Siemens S7 PLC-based automation systems. Proficient in Siemens SIMATIC STEP 7 programming using Ladder Logic (LAD), Function Block Diagram (FBD), and Structured Control Language (SCL). Skilled in developing HMI applications using Siemens TIA Portal. Experienced in system integration, hardware installation, and troubleshooting. Proven track record of successful project delivery, collaborating with cross-functional teams, and providing technical support and training. Committed to continuous improvement and optimization of automation systems.

EMPLOYMENT/WORK EXPERIENCE

Date: October 2019- January 2024 **Organization:** MBDA missile systems (UK)

Job Title: Automation Engineer (SIMATIC S7-1200)

- Developed and implemented automated test systems for MBDA missile actuation components using Siemens PLC programming, TIA Portal, HMI, and ladder logic.
- Integrated PLCs with sensors (power supply measurement, vibration, speed, position) and electric actuators (servo and stepper motors) to create comprehensive test setups.
- Utilized PLC-based closed-loop control, data acquisition, and safety interlocks to ensure accurate, stable, and safe operation of test equipment.
- Created user-friendly HMI screens for real-time monitoring and control of test processes, displaying sensor data, motor positions, and system status.
- Led cross-functional team in design, integration, and qualification of missile actuation systems, ensuring compliance with specifications and requirements.
- Maintained configuration management plans and executed factory and site acceptance tests to validate system performance before deployment

Date: May 2015-August 2019

Organization: Petrofac Aberdeen (UK)

Job Title: PLC Commissioning Engineer

- Installed, wired, and commissioned Siemens S7 PLC-based automation systems
- Performed hardware and software integration, conducting thorough testing and troubleshooting
- Developed PLC programs using Siemens SIMATIC STEP 7 and HMI applications using TIA Portal
- Collaborated with cross-functional teams to ensure successful project delivery
- Provided technical support and training to stakeholders

Date: April 2013 –December 2016 **Organization:** SAFRAN Electrical (UK)

Job Title: Senior Specialist Project Engineer

7+ years developing electrical and instrumentation specifications and requirements documents. Skilled at gathering needs and authoring detailed technical specs.

- Led system decomposition and analysis to support maintenance and design changes. Expertise in architectural breakdowns, functional analyses, and trade-off studies.
- Reviewed and approved technical documents and schematics. Ensured quality standards and requirements were met.
- Planned and executed system-level test procedures and test cases. Managed shutdowns and validation testing.
- Maintained updated drawings, specs, and records through rigorous change control.
- Managed site control system and software service contracts and agreements.
- Presented in internal design reviews. Ensured system alignments with needs and engineering best practices.

Date: Sept 2008 –April 2013 **Organization:** Goodrich Electrical Power Systems (UK)

Job Title: Senior Electronic Test System Engineer (CH53K Sikorsky Helicopter)

Design and commissioning of board level automatic test equipment for the CH53-K AC/DC power distributions line replacement unit for Sikorsky helicopter.

- Electronic circuit simulation and analysis
- Design and build supplementary test circuits for control, protection and
- Built-In Test functions.
- Performed hardware and software integration as part of system verification and validation testing. Ensured components interfaced correctly.
- Configured data acquisition systems and synchronized data collection from accelerometer, thermocouple LVDTs and other sensors during LRU ESS test.

EDUCATION

2014 – 2015 PGDip Engineering and Management of Manufacturing Systems
Cranfield University, UK

2004 – 2007 BSc (Hons) Electrical and Electronic Systems
University of Westminster, London UK

ADDITIONAL SKILLS

PLC Programming: Siemens SIMATIC S7-1200, Ladder Logic, Function Block Diagram (FBD), Structured Control Language (SCL).

Software: Siemens TIA Portal, National Instruments Labview, JavaScript.

CAD tools: AutoCAD Electrical and MS Visio.

Electronic simulation software: Pspice and Zuken.

Software change and configuration: Dimensions CM Product Lifecycle Management: PTC WINDCHILL/Creo, Cimage.

Communication protocols: Profinet, Profibus, Modbus TCP, RS422, RS485, MODBUS, ARINC and AFDX