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Human Resources

Software Controls Engineer Job Description

Job Title: Software Controls Engineer

Location: Loughborough, UK

Department: Controls

Role Purpose

The Software Controls Engineer to work on a variety of protection control and automation systems, in electrical power control and monitoring systems. To work as part of an engineering team, ensuring that BRUSH delivers products which always exceed customers' expectations for quality, features and performance and which make an acceptable return on investment for the company owners.

SECTION 1 – Key Responsibilities

- Develop and test electrical power system related software and firmware.
- Develop and test communication related software and firmware.
- Configure and test networking equipment.
- Participate in R&D project planning, lead R&D design review meetings and follow ups with R&D team members.
- Participate in R&D related cross-functional activities such as customer meetings, quality improvements, product and R&D project review.
- Provide regular R&D related project progress updates, escalating potential impacts to customer and delivery expectations to relevant stakeholders.
- Provision of related technical support to customers and to sales, manufacturing, testing, commissioning functions.
- Ensure all data protection activities of personal and special category data; pertaining to current employees, customers and all other external stakeholders, are done so in line with the company's data Protection Policy.

SECTION 2 – Person Specification

Qualifications or Functional Experience

As a Software Controls Engineer, you should be experienced in:

- Prototype modelling including Working across the full software V-Cycle.
- Protection / Controls / Automation software development.
- Communication protocols and software development, testing and implementation.
- Networking equipment configuration and testing.
- Mil (model in loop), Hil (hardware in loop) and Sil (software in loop) testing.
- Verification and Validation testing.
- Prototype and integration testing.



Knowledge/Skills

It would be beneficial, if, as a Software Controls Engineer, you could be experienced in some of the following:

- C/C++ embedded automotive software development.
- Good knowledge of LINUX, Windows, JavaScript, MQTT, REST-APIs, no-SQL databases, ONX, VxWorks and FreeRTOS etc.
- Knowledge of MISRA, Git, CVS etc.
- Knowledge of communication and networking protocols along with software aspect internet protocols including UDP, TCP, IEC 61850, MQTT, SDN, REST APIs.
- Deterministic networking in real time applications.
- Knowledge of PLCs, Protection Relays, Control Equipment and Automation Solution within electrical power industry.
- Cybersecurity applications.
- Knowledge and understanding of applicable electrical power industry standards i.e. IEC, IEEE, UL etc.

Personal Attributes

- Excellent communication skills.
- Office computing skills such as Word Processing and Spreadsheet manipulation.

