Rahulsagar Voduru

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**Dear Sir / Madam,**

**Subject: Application for full time job for the role Application Design Engineer**

**(Job ID: 005IPM) at Schneider Electric available to work from December 2019**

I am a Master student of Industrial informatics at University of applied sciences Emden/Leer, Germany. I am currently in my final semester of the course working on my master thesis which is expected to complete by the end of October. The goal of my master thesis is to develop a predictive maintenance module which makes use of machine learning algorithms to derive patterns from historical breakdown data and alert the user in case there is a pattern match between current data and the breakdown patterns. It predicts the expected time and the root cause of breakdown from the sensor data and alerts the user. I am doing my master thesis in Boom Software GmbH, Oldenburg, Germany.

Before taking up master course in Industrial Informatics at University of Applied Sciences Emden/Leer, I worked in Sembcorp Energy India Ltd (SEIL-A 2x660MW Supercritical Thermal Powerplant) for 4 Years & 6 months. SEIL is the first venture of Sembcorp Group a Singapore based MNC in India. I joined SEIL in 2013 as a Graduate Engineer Trainee and by the time I resign from the company in 2018, I was a Senior Control & Instrumentation Engineer. Schneider Electric was the automation partner for SEIL which possess 9 PLC packages (Quantum CPU & M340 I/Os) for Balance of Plant (BOP) Systems and Invensys DCS for the Boiler, Turbine & Generator (BTG) systems. I was involved in the erection, commissioning of all these systems which provided me a rare opportunity to experience all the activities right from erection to the final production. This also provided me an opportunity to interact and share knowledge with bright minds from Schneider Electric India.

I participated in many Site Acceptance Tests from client side for process logic, ensuring that the process logic was in line with the control philosophy. This provided a good exposure to the Schneider Electric’s tools for PLC configuration & SCADA development. Considering my contribution, I was offered a company sponsored training in PLC logic & SCADA Development at the Schneider Electric’s headquarters in Gurgaon, India. This vastly improved my exposure to tools like Unity Pro, Vijeo Citect and Vijeo Designer also the understanding of power distribution & networking aspects of PLC. Later, due to the contractual issues for my company SEIL with our EPC contractor BGR Energy Systems, then arose a need for the employees from client side to step up and contribute for acceleration of erection & commissioning of PLC systems without the presence of Schneider Electric’s support. I believe this situation was a blessing in disguise for my career. Though I possess the basic knowledge about PLC and SCADA systems at that point, it was nowhere near to the point where we can take commissioning forward independently. That period in my career was tough and was also the period with an extremely steep learning curve where I had a chance to do a lot of trial and error and learning by doing. This process entitled me with a very deep knowledge about all internal complexities of working with PLC systems in the aspects of hardware, networking, configuration, logic development. This provided me an extreme clarity about the working of each and every subsystem from the field sensor to the I/O configuration and necessary gateways for interfacing the field devices.

I was an area in charge of Ash handling Systems and a Deputy in charge of all PLC systems in the plant. As an in charge, I developed the auto logic for ash conveying sequence involving 150 pneumatic actuators, vacuum pumps and their corresponding instrumentation from the scratch which is in service till date. Being a deputy in charge, I had the responsibility to address all the modifications that are requested by operations, electrical, mechanical departments. In this regard, I worked on automatic report generation which gave me exposure to the Vijeo Citect’s Cicode. Recognizing my contribution in taking commissioning forward, I was again offered a company sponsored training in Invensys DCS in 2015 at Schneider Electric’s facility in Shanghai, China. This provided me an opportunity to extend my skills to DCS as well. Later, I was involved in the commissioning & maintenance activities in DCS systems. This experience also helped me in execution of a modification to interface all PLC systems with the Invensys DCS using OPC for centralized monitoring of all plant subsystems. After the plant reached the production phase in mid 2015, I took the responsibility of maintenance of PLC systems. The responsibilities include identifying & procuring mandatory spares and periodic maintenances and also engineering and execution of modifications in process logic and field instrumentation. Towards the end of my time at SEIL, I was also made the in charge of the Invensys Operator Training Simulator to keep those systems in right order and supporting operations department in training newly recruited Operators.

After a great learning period at SEIL, I got enthusiastic to learn more about automation and desired to be involved in cutting edge projects. This made me to opt for a master course in Industrial Informatics which emphasizes the Industrie 4.0 concepts and digitalization technologies. My innate passion for programming equipped me with the ability to program in high level languages like Python, C#, PHP apart from PLC programming. With my strong work experience in Operational Technologies and my academic background in Information Technologies, I would like to take up challenging responsibilities in the IIoT domain which is considered the future of automation. A full time role at Schneider Electric provides me an opportunity to work on real world problems and enhance my personal and professional capabilities. Singapore being a great country to work and also due to its proximity to my home country (India), I opted to apply for a job in Singapore and would like to submit my candidature for your perusal for the role of Application Design Engineer.

**Sincerely,**

**Rahulsagar Voduru**

