SIEMENS

SUMMER Internship Program

Organization: Gas and Power (Energy)
Job Family: Internal Services / Interns, Trainees & Apprentices
Demand Type: Full Time / Limited
Location: Bangkok-Sweden, Thailand
Required for: April to July 2020

The operators of the complex energy systems such as power plants oversee daily activities to maintain the system at the optimum performance point. These activities include daily inspections, dispatch decisions, efficiency monitoring, maintenance planning and so on.

The purpose is to keep the machines at the design efficiency point to minimize the fuel consumption cost and maximize the availability and performance. To decide about the right time to do any of these routine maintenance activities such as air inlet filter exchange, lubrication oil exchange and washing the compressor to cope with fouling, the operators are following the instructions provided by the Original Equipment Manufacturer. Theses instructions are developed based on the long experience of the OEMs and will provide the good optimization point for all applications.

However, with the recent development of IOT devices, connectivity and data analytics, there are rooms for further improvement of these procedures to make them machine-specific. Siemens already has developed extensive algorithms to be able to analyze the trend and behavior of each equipment and determine the best time for next upcoming maintenance activity.

The purpose of the current project is to develop a user interface for the operators to be able to trace their equipment efficiency and be notified of the time for next upcoming compressor wash. The app will help the operators to focus on the optimization of the site operation and maximize the generated value.

Project tasks:

- Understand the operators' need and translate it to the APP features, visualizations and interactions (UX - User Experience)
- Develop an APP (Tableau / Python) according to the UX results.
- Integrate the APP with the calculation code to be able to establish a data flow from the calculation to the visualization.
- Deploy the APP and test it with some real equipment data to validate the results
- Document and hand-over the results

Required Skills:

- Academic Background in Disciplines preferably in ADME, AERO, ICE or MECHANICAL.
- Good programming skills, specially Python & Java Skills in Tableau
- Familiarity with signal processing methods
- Familiarity with agile product development
- Strong English communication skills