Knowledge graph for process knowledge via xPPU and usability for alarm implementation (BA/SA/MA)

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Alarm Database

Data Analysis

**Knowledge Graph**

Motivation:

Alarm management systems (AMS) play an important role in ensuring the safe operation of the production system. Alarms are used to inform the plant operator of abnormal situations; However, these often result in a large number of alarms that need to be handled manually. In addition, causal dependencies between alarm sources increase the number of simultaneous alarms. Therefore, it is important to investigate methods to automatically identify sequences of alarms and their dependencies to decrease their number.

Task Description:

Your task is to analyze historical alarm data for fault handling. You will create and implement alarm checks to investigate and determine causal dependencies between simultaneous alarms and their root error. Finally, you will need to build an Ontology (i.e., using GraphDB) based on your results.

Requirements:

- Experience and knowledge in programming and statistics.
- Knowledge about Python and/or java.
- Independent and self-reliant work ethic.
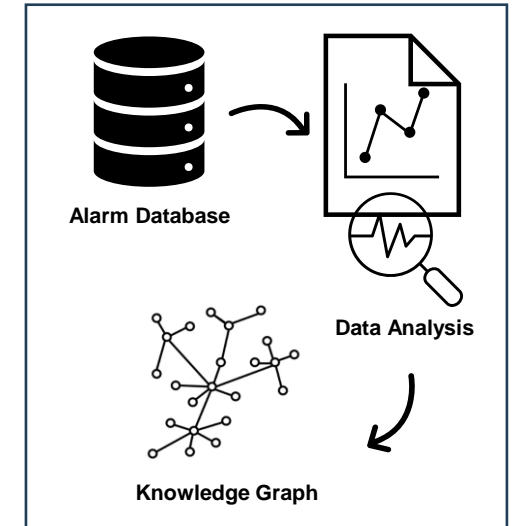
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