Abstract

Production efficiency is the most important criteria for fabrication. Manufacturing Execution Systems use digitalised production side information to improve the production processes. This report presents the implementation of such a system. The focus is on the data gathering, cloud storage and visualization. The project is conducted by using Arcstone software. As the concept of Manufacturing Execution Systems is not established in local companies, this report serves as a guide for their next step of industrial revolution. It will show them the benefits of a more detailed observed production. Further, companies can use explanations as a guideline to implement the system in their own production.

Industrial production is experiencing fundamental changes. Undergoing innovations in the fields of artificial intelligence and data processing have a big impact. As changes happen digital, it is often hard to imagine the opportunities, especially for local companies. This report presents an approach to implement a neuronal network for data analysis. Furthermore, it creates a platform for knowledge transfer for domestic factories. The explanations cover how to collect productions data, how to preprocess it and finally how to use convolutional and recurrent neuronal networks to analyse it. Additionally, an evaluation for the implementation of the software on the factory simulation of the Innovationslab of the Universiti Tun Hussein Onn Malaysia is performed. The results will certainly help the local industry to acquire knowledge on how to improve their production.