Data is Your Friend. Using Industrial Internet of Things (IIoT) to Reveal Process Improvement Opportunities

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The connectivity of the industrial internet of things (also known as IIoT) gives way to data collection, exchange, and analysis. IIoT refers to interconnected sensors, instruments, and devices that are networked with the computers' industrial applications. The connectivity of IIoT facilitates economic benefits such as productivity and efficiency. IIoT solutions can make organizations more efficient and effective in their operation. IIoT primarily focuses on the devices that work with one another without human interaction or intervention. Potential applications of IIoT include: Digital health, Smart Cities, Farming, Automotive uses, Smart energy, etc. The IIoT is enabled by technologies such as cybersecurity, cloud computing, edge computing, mobile technologies, machine-to-machine, 3D printing, advanced robotics, big data, internet of things, RFID technology, and cognitive computing. Mohawk College's IIoT lab focuses on implementing IIoT sensors technology into industrial usage.

In this tutorial, we will discuss the motivations, challenges and design of IIoT. We will support the tutorial with several case studies we worked on recently on our IIoT lab such as Telehealth for patients, Agricultural monitoring at farm sites and real- time notification of power failure.

References:

M. Saturno, V.Pertel, F. Deschamps, E.Loures, "PROPOSAL OF AN AUTOMATION SOLUTIONS ARCHITECTURE FOR INDUSTRY 4.0, " 24th International Conference on Production Research, September 2017

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