

Applications and Limitations of Industrial Internet of Things (IIoT) in Different Industrial Sectors

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Abstract

Industries of the 21st century have been transformed by the emergence of the Industrial Internet of Things. This evolution of technological tools and techniques has already started replacing the conventional methods of manufacturing industries. As such this transformation to a digitalized society is upgrading the processes of manufacturing and production facilities with enhanced capacity and efficiency, increased safety in the utility industry, and higher profitability on the investment. Today's manufacturers need to be consistent in all areas of operations to remain competitive in the global market, which is comparable to lightning speed. Meanwhile, with the introduction of Industry 4.0, organizations and businesses are shifting towards the skilled workforce, smart factory, automated machines, and intelligent automation systems through the application of emerging technologies such as artificial intelligence, machine learning, IIoT, additive manufacturing, big data analytics, and cloud computing. This chapter discusses several IIoT applications in sectors such as automotive, predictive maintenance, transportation, smart metering, manufacturing, medical care, etc. We will review various real-life industrial cases in which corporations and business firms have seen success in introducing IIoT based technologies in their production facilities with outstanding performance reports. IIoT based technologies can assist in progressing the conventional industrial settings towards automation and digitalized systems, thereby providing a better prospect for industrial sectors.

Keywords

Industry 4.0, Cyber security, Big data analytics, Smart factories and Industrial Internet of Things.

Biographies

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