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Patent Search

Invention Title	FUZZY LOGIC AND DEEP LEARNING APPROACHES ENHANCING INDUSTRY 4.0 IMPLEMENTATION IN MANUFACTURING AND CONTROL S
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Abstract:

The machine learning (ML) field has deeply impacted the manufacturing industry in the context of the Industry 4.0 paradigm. The industry 4.0 paradigm encourages t smart sensors, devices, and machines, to enable smart factories that continuously collect data pertaining to production. ML techniques enable the generation of actic intelligence by processing the collected data to increase manufacturing efficiency without significantly changing the required resources. Additionally, the ability of ML to provide predictive insights have enabled discerning complex manufacturing patterns and offers a pathway for an intelligent decision support system in a variety of manufacturing tasks such as intelligent and continuous inspection, predictive maintenance, quality improvement, process optimisation, supply chain management, a scheduling. While different ML techniques have been used in a variety of manufacturing applications in the past, many open questions and challenges remain, from E duration, storage, and understanding, data reasoning to enable real-time actionable intelligence to topics such as edge computing and cyber security aspects of smai manufacturing. Hence, this special issue is focused on bringing together a wide range of researchers to report the latest efforts in the fundamental theoretical as wel experimental aspects of ML and their applications in manufacturing and production systems.

Complete Specification

FUZZY LOGIC AND DEEP LEARNING APPROACHES
ENHANCING INDUSTRY 4.0 IMPLEMENTATION IN
MANUFACTURING AND CONTROL SECTOR
FIELD OF THE INVENTION
This invention Users need to determine the relationship between input and output and choose the
minimum number of variables for input to fuzzy logic and rate of error.
BACKGROUND OF THE INVENTION
Manufacturing can be defined as the fabrication or assembly of components into finished products on a
large scale. One of the most critical manufacturing goals is to produce more high quality products at
minimum costs. But manufacturing products can be a very expensive and complicated process for
businesses that do not have the associated resources and tools to design and develop quality products
.Over the last couple of centuries, the history of manufacturing have changed dramatically. Instead of
items being produced using manual labour, industries sought machines in order to produce the items,
leading to the Industry 4.0 has given rise to an emerging sector in manufacturing called Smart
Manufacturing that opens doors for analytics in the industry. It is a technology- driven approach that

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