Artificial Intelligence in Manufacturing: Transforming Industry 4.0

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Abstract*: Artificial Intelligence (AI) is revolutionizing the manufacturing industry by introducing innovative solutions that enhance operational efficiency, ensure consistent product quality, and drive competitive advantages. This paper delves into the multifaceted applications of AI in manufacturing, emphasizing its role in predictive maintenance, process optimization, and supply chain management. Through an analysis of real-world case studies, we showcase the transformative impact of AI and explore its potential to redefine the industry's future through emerging trends and sustainability-focused innovations*

Keywords: optimization, operational efficiency, emergingtrends,sustainability-focused innovations

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199