

Revolutionizing Engineering with Artificial Intelligence and Machine Learning: Elevating Industrial Efficiency and Problem-Solving

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Abstract

In an era marked by technological breakthroughs, this research paper explores the paradigm-shifting influence of Artificial Intelligence (AI) and Machine Learning (ML) within the realm of engineering. Focused on predictive maintenance, optimization of manufacturing processes, and adept resolution of intricate challenges across diverse engineering domains, this study unravels the profound implications of AI and ML integration. Meticulous examination of their convergence in these domains underscores the capacity to amplify industrial efficiency, optimize costs, and propel innovation to unprecedented heights. This paper elucidates the pivotal role of AI and ML in reshaping conventional engineering practices, heralding a new era of prowess and ingenuity.

Keywords: Engineering, Artificial Intelligence, Machine Learning, Predictive Maintenance, Manufacturing Optimization, Complex Problem-Solving.