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ARTIFICIAL INTELLIGENCE IN ENTERPRISE RESOURCE PLANNING: A SYSTEMATIC REVIEW OF INNOVATIONS, APPLICATIONS, AND FUTURE DIRECTIONS

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Abstract

The revolutionary significance of artificial intelligence (AI) in contemporary enterprise resource planning (ERP) systems is examined in this article systematic review, which synthesizes recent findings and advancements from a variety of fields. The article highlights thirteen major areas where artificial intelligence (AI) is transforming ERP functionality through an examination of recent technological developments. These include cognitive computing for decision support, natural language processing for improved user interfaces, and machine learning-driven predictive analytics. With a focus on cutting-edge technologies like edge computing, blockchain integration, and quantum computing applications, the essay covers both theoretical frameworks and real-world applications. With average processing time savings of 35–45% and decision accuracy increases of up to 60%ross a range of business activities, the results show that AI-enhanced ERP systems exhibit notable benefits in operational efficiency. System integration, data quality management, and regulatory compliance still face difficulties, nevertheless. The paper also identifies important research needs in industry-specific AI applications and cross-platform standards. In addition to describing future research paths centered on scalability, security, and enterprise-wide integration techniques, this thorough article analysis offers insightful information for scholars, practitioners, and businesses looking to utilize AI capabilities in ERP systems. In order to further theoretical knowledge and real-world application in the sector, the essay ends by suggesting a methodology for assessing and integrating AI advancements in ERP systems

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