The Role of Artificial Intelligence in Risk Assessment and Mitigation in the Financial Sector

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Abstract: *Artificial Intelligence (AI) is transforming the financial sector by enhancing risk assessment and mitigation processes. This article explores the various ways in which AI technologies, such as machine learning, deep learning, and natural language processing, are utilized to manage and mitigate financial risks, including credit, market, and operational risks. AI-driven tools enable financial institutions to predict, assess, and control risks with greater precision, reducing fraud, optimizing investment strategies, and enhancing decision-making processes. The paper also discusses the challenges faced in implementing AI in risk management, including data privacy concerns, regulatory issues, and integration difficulties. By examining case studies and current practices, this article highlights the significant impact of AI in reshaping risk management paradigms in the financial sector. The outlook for AI in this area is also discussed, emphasizing the potential for further innovations.*

Keywords: Artificial Intelligence, Risk Assessment, Risk Mitigation, Financial Sector, Machine Learning, Fraud Prevention, Investment Strategies

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