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Talk Title:

Optimizing Business Process Systems with AI and ML: Challenges and Innovations

Abstract / Profile:

Abstract: In today's rapidly evolving digital landscape, enterprises are leveraging Artificial Intelligence (AI) and Machine Learning (ML) to transform Business Process Systems across industries, particularly in financial services and healthcare. Traditional enterprise workflows often suffer from inefficiencies due to manual processes, data silos, and the inability to adapt to real-time demands. AI and ML offer solutions by automating processes, improving predictive analytics, and enhancing decision-making capabilities. This talk explores the role of AI-driven automation in optimizing business process management, focusing on real-world applications, benefits, challenges, and future trends. Key case studies will illustrate how financial enterprises employ AI-based fraud detection, risk assessment, and transaction automation, while healthcare systems leverage predictive analytics and AI-powered diagnostics to improve patient outcomes. Despite these advancements, implementing AI in business processes presents several challenges, including data privacy concerns, ethical considerations, model interpretability, and regulatory compliance. The discussion will highlight strategies to mitigate these risks while maximizing AI's potential for enterprise transformation. Furthermore, emerging AI technologies such as Natural Language Processing (NLP), Deep Learning, and Intelligent Automation are reshaping business operations by providing actionable insights and automating complex workflows. The presentation will also examine how enterprises can integrate AI with Blockchain, IoT, and Quantum Computing to further enhance efficiency and security.