Summary Business Process Mining

The first article explores the role of artificial intelligence (AI) in driving business model innovation (BMI) and digital transformation in industries. It highlights the need for understanding AI and organizational capabilities for successful implementation. Challenges include transparency issues, lack of employee trust, analog processes, and misunderstandings of AI. The article proposes a four-step roadmap for AI implementation: understanding AI and organizational capabilities, understanding the current business model, developing necessary capabilities for AI, and reaching organizational acceptance. The article also explores the impact of AI and machine learning (ML) in the corporate environment, highlighting their capacity to optimize processes, improve decision-making, and stimulate innovation. It examines the fundamental applications of AI and ML, addressing challenges and benefits derived from their adoption. The study highlights the transformative impact of AI and ML on business operations, offering companies a competitive advantage through better efficiency, reduced costs, and improved customer experiences. The research also addresses challenges such as data privacy and workforce reskilling, emphasizing the need for a well-thought-out strategy. It advocates for staying informed about developments to maintain a competitive edge. The research identifies key areas for future exploration, including ethical AI, AI-enhanced decision-making, AI in sustainability, interdisciplinary research, and AI governance and regulation.

The second research paper explores the integration of artificial intelligence (AI) into business models of 162 global startups, focusing on four main archetypes: Deep Tech Researcher, Data Analytics Provider, AI Product/Service Provider, and AI Development Facilitator. The study highlights the innovative value propositions made possible by AI technology, which range from cognitive insights generation to real-time anomaly detection. It also highlights the importance of ongoing learning and the multifaceted applications of AI technology, categorizing them into machine learning, robotics, and natural language processing/computer vision. Data is a key element in the value creation process, with startups using various data sources to train their AI solutions. Hardware provision is also crucial, with startups offering comprehensive platforms with sensors or robotic components. Startups adopt various value delivery mechanisms, including software as a service (SaaS), platform as a service (PaaS), and standalone AI technology offerings. The study also classifies startups based on their target clientele and industry scope.

The article explores the transformative impact of Artificial Intelligence (AI) and Machine Learning (ML) on industries, highlighting their symbiotic relationship and the challenges and ethical considerations associated with the AI revolution. It highlights the need for skilled professionals in AI and ML, cybersecurity measures, compliance with regulations, and transparent decision-making processes. The research also emphasizes the importance of education, skill development, and balancing innovation with ethical considerations for a sustainable and inclusive AI-driven future. It envisions future perspectives on advanced AI applications, personalized experiences, and inclusive AI, with increased collaboration between humans and AI, ethical considerations in AI development, and the integration of AI in emerging industries. The article concludes by highlighting the ongoing AI revolution's potential for industries moving forward.

The article discusses the significance of Business Process Reengineering (BPR) in improving the processes of medium and large enterprises. It highlights the integration of a process modelling tool called SHAMASH with Artificial Intelligence (AI) planning techniques to generate useful process models. The AI community's expertise in planning and scheduling can offer valuable solutions to improve workflow technologies. The article explores the similarities between AI planning and workflow modelling, emphasizing the importance of collaboration between the two disciplines to enhance business productivity. The article presents a framework for merging the PRODIGY 4.0 planner and SHAMASH workflow modelling tool, demonstrating how they can generate optimized process models automatically. Further improvements to the integration process, such as parallel planning, conditional plans, and optimization procedures using Machine Learning techniques, are suggested.