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Paper title: Machine Learning and AI in Business Intelligence: Trends and Opportunities

Keywords specific to the paper: Machine Learning; Artificial intelligence; Business Intelligence

Summary of the main contributions:

The article explains how technologies are improving business intelligence through predictive analytics, personalized customer service and automated data analysis. The integration of artificial intelligence and machine learning is highlighting future opportunities, transforming corporate decision-making, enriching customer experiences, and analysing data.

Transparency and ethics have become key variables in the deployment and development of artificial intelligence models. Indeed, AI models are becoming increasingly complex. Making these models more transparent would make it easier for users to understand why and how predictions or decisions have been made.
Ethics is also a variable of the utmost importance when developing and deploying AI. AI models rely on very large quantities of data, including personal or sensitive data. To comply with data protection regulations and protect user privacy, AI models must adopt robust security measures, secure management practices, and use anonymization techniques.
Human supervision of AI systems is of paramount importance. Not only does this ensure that the decisions that are made are fair, responsible, and ethical, it also ensures a balance between AI and efficiency.

Future opportunities thanks to machine learning and AI
- Improved data analysis
- Handling large volumes of data
- Optimization of operational processes
- Detection of irregularities (identification of fraud, errors, etc.)
- Simplified decision-making
- Improved operational efficiency.
- Cost reduction
- Predict the future through data analysis.
- Faster decision-making
- Rapid detection of emerging trends => rapid seizure of market opportunities
- Can provide insights that would not have been evident without the advanced analysis of these technologies.

For example, AI can be used to analyse customer data to create a more personalized offer, deliver a more tailored marketing campaign, or recommend products that are more in line with customer desires.

The creation of chatbots is another example of the significant advances made by ML and AI in the world of business intelligence. Indeed, this AI-powered technology represents a major advance in process automation. By automating interactions, companies have been able to better respond to customer needs, reduce waiting times and free up company employees for more complex tasks.