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Abstract The study aims to identify the role of AI-powered digital analytics tools in enhancing organizational digital activities by reviewing their concepts, practical applications, and related challenges. A descriptive-analytical methodology was adopted, relying on secondary sources such as books and previous studies to build a comprehensive theoretical framework and examine case studies from global and Arab institutions. The findings reveal that these tools contribute to process automation and improved operational efficiency, provide personalized customer services, support strategic decision-making, and foster human capital development through skill analysis and job prediction. Case studies confirmed that their use strengthens competitiveness and innovation in dynamic digital business environments. The study recommends investing in employee training on AI technologies, starting with small pilot projects before large-scale implementation, leveraging cloud computing for big data management, and establishing AI governance and ethical frameworks to ensure the responsible and sustainable use of these tools.	
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1. Introduction

The contemporary world is witnessing an unprecedented digital revolution driven by rapid advancements in information and communication technologies. This has resulted in a dynamic business environment characterized by constant change and fierce competition. The exponential growth of digital data—known as Big Data—has created new challenges for organizations in their ability to analyze such data and extract actionable insights that enhance performance and competitiveness. In this context, AI-powered digital analytics tools have emerged as one of the key strategic pillars of digital transformation. Their role goes beyond mere data processing to include forecasting future trends, providing innovative solutions that support decision-making, and improving customer experience.

Digital transformation is no longer a secondary option for organizations; it has become an existential necessity imposed by the demands of global markets. Hence, institutions are now required to adopt advanced tools capable of employing artificial intelligence in analyzing complex data and turning it into added value. The importance of these tools lies in their contribution to enhancing operational efficiency, strengthening competitiveness, and supporting sustainable innovation, making organizations more capable of adapting to volatile business environments.

1.1. Research Problem

This study aims to highlight the vital role played by AI-powered digital analytics tools in developing the digital activities of enterprises. It does so by analyzing their conceptual and theoretical dimensions, reviewing practical applications, and addressing the challenges and risks associated with their use. Accordingly, the main research problem can be formulated as follows:

How do AI-powered digital analytics tools contribute to developing the digital activities of enterprises?

Based on this central question, the following sub-questions arise:

- What is the concept of digital activity within enterprises and its strategic dimensions?
- What are the main AI-powered digital analytics tools?
- How can these tools enhance operational efficiency and customer experience?
- What are the challenges and risks associated with employing AI in digital analytics?

1.2. Significance of the Study

The significance of this research emerges through several dimensions:

- **Theoretical significance:** It enriches the literature on digital transformation by focusing on the intersection between digital analytics tools and artificial intelligence—a rapidly evolving and contemporary field.
- **Practical significance:** It helps organizations understand how to employ digital analytics tools to improve performance and strengthen competitive advantage.
- **Social significance:** The adoption of these tools can enhance the quality of services provided to customers and improve the ability of local and Arab enterprises to adapt to the global digital environment.
- **Future significance:** It opens pathways for researchers to develop deeper studies on integrating AI into business management and digital marketing.

1.3. Research Methodology

To achieve its objectives, this study adopts the descriptive-analytical method, which is one of the fundamental approaches in administrative and social research. It relies on secondary data sources such as books, academic articles, and previous studies to construct a comprehensive theoretical framework and review related empirical experiences.

1.4. Previous Studies

Several studies have addressed the topic of digital analytics and artificial intelligence from different perspectives, including:

- **Wang, W.-Y. C. (2020). *Analytics in the Era of Big Data: The Digital Transformations***
This study examined the role of Big Data analytics in enabling digital transformation, emphasizing that advanced data analysis is a primary driver of digital transformation, with digital infrastructure and cloud computing as essential enablers.
- **Alghamdi, N. A. (2022). *Augmented Analytics Driven by AI: A Digital Transformation Perspective***
This research focused on the role of AI-augmented analytics in supporting digital transformation. It concluded that these tools accelerate data processing and generate accurate insights for decision-makers, though human expertise remains critical to ensuring output quality.
- **Chen, D., Esperança, J.P., & Wang, S. (2022). *The Impact of Artificial Intelligence on Firm Performance***
Using the Resource-Based View, this study analyzed the impact of AI investment on firm performance and found that such investments positively influence operational efficiency and innovation, moderated by organizational culture.
- **Jaaija, A., & Farah, R. (2023). *The Role of Digital Analytics Tools in Understanding Consumer Buying Behavior***

The study demonstrated that digital analytics tools enhance the effectiveness of marketing campaigns and improve key performance indicators such as conversion rates and return on investment.

- **Khneyzer, C. (2024). *AI-Driven Chatbots in CRM: Economic and Managerial Implications***
This research explored how Big Data analytics contribute to organizational innovation. Findings revealed that advanced analytical capabilities foster product and service innovation and improve supply chain performance, while emphasizing the importance of employee upskilling.
- **Sivarajah, U. et al. (2024). *Big Data Analytics and Innovation: A Study on Organizational Capabilities***
This study found that advanced analytics capabilities significantly contribute to innovation by enabling the development of new products and services, while also highlighting the need for skill development to ensure optimal use of such tools.

Overall, prior research indicates that academic interest in AI-powered digital analytics tools has evolved gradually—from early theoretical frameworks (Wang, 2020) to AI-augmented analytics (Alghamdi, 2022), and then to empirical studies linking AI investment to performance (Chen et al., 2022). Subsequent research expanded into practical applications, such as consumer behavior analysis (Jaaija& Farah, 2023) and customer service via chatbots (Khneyzer, 2024), culminating in studies connecting analytics to innovation (Sivarajah et al., 2024).

Despite these advances, existing studies remain fragmented, often addressing a single dimension without offering an integrated understanding of how AI-powered digital analytics tools holistically support the development of digital enterprise activity. Moreover, little attention has been given to ethical and regulatory aspects—such as data privacy, algorithmic bias, and data governance. This research seeks to fill this gap by presenting a comprehensive framework that integrates technical, operational, and ethical dimensions to better understand these tools' strategic role in enhancing digital enterprise activity.

2. Digital Activity of Enterprises

Digital activity has become an essential component of modern enterprise strategy, serving as the most effective means of communicating and building relationships with customers. With increasing reliance on digital platforms, investing in analytics and measurement tools has become crucial for understanding audience behavior and improving content quality. Digital activity also enhances brand presence, improves marketing campaign efficiency, and fosters sustainable competitive advantage in a fast-changing market environment.

2.1. Concept of Digital Activity in Enterprises

Digital transformation is the investment in mindset and behavioral change to achieve a fundamental transformation in work methods by leveraging technological advancements to serve stakeholders faster and better. It offers vast potential for building efficient, competitive, and sustainable communities by radically transforming services provided to consumers, employees, and beneficiaries—improving their experience and productivity through aligned operational processes and redesigned implementation mechanisms. It also requires cultivating a culture of creativity within the workplace and involves changes to all organizational components—from infrastructure and operating models to service and product marketing (Unified National Platform, 2025).

According to Slaimi& Bouche, 2019, p. 947, digital transformation is “the process through which governmental sectors or organizations shift to a digital-based model of operation to innovate products and services and create new revenue channels that increase product value, through radical changes in business models and operations.” It is symbolized by DX (Digital Transformation).

Thus, the digital activity of enterprises can be defined as the comprehensive transformation of business processes, operational models, and organizational culture through the integration of digital technologies across all aspects of work. It goes beyond the mere use of digital tools to encompass cultural and cognitive change aimed at enhancing efficiency, productivity, and customer experience. Key technologies adopted by organizations include cloud computing, the Internet of Things (IoT), artificial intelligence, big data analytics, and mobile applications, among others.

3. Concept of AI-Powered Digital Analytics Tools

Organizations use AI-driven analytics and measurement tools to solve data-related problems through software and platforms that collect, process, and convert data into measurable insights. Since consumers are a primary focus, organizations emphasize collecting data that helps improve their services or products to better satisfy and understand customer needs (Jerri, 2020, p. 15).

AI-powered digital analytics tools are defined as advanced systems that rely on artificial intelligence technologies—such as machine learning and predictive analytics—to process vast amounts of digital data and extract actionable insights. These tools surpass traditional analytics by discovering hidden patterns, predicting future behaviors, and providing strategic recommendations based on complex algorithms (Shaker Alalag, 2025).

3.1. Classification of AI-Powered Digital Analytics Tools by Function

- **Predictive Analytics Tools:** Use AI to build probabilistic models that forecast future developments and customer behavior, helping organizations prepare for potential crises or market fluctuations (Shaker Alalag, 2025).
- **Machine Learning Tools:** Analyze massive datasets to uncover patterns and hidden relationships that humans might overlook—such as customer segmentation or trend identification (Shaker Alalag, 2025).
- **Advanced Analytics and Data Visualization Tools:** Platforms like IBM Watson Discovery and Tableau AI provide advanced capabilities for analyzing unstructured data and presenting it visually to facilitate decision-making (Al-Shahri, 2025). Examples also include open-source tools like TensorFlow and PyTorch, and commercial platforms such as RapidMiner, KNIME, DataRobot, and H2O.ai (Rafi, 2025).

It is important to distinguish methodologically between analytics tools designed to enhance digital activity and those intended for verification and detection. Some sources classify tools like Copyleaks and Turnitin—used to detect AI-generated content—as digital analytics tools (Ahmed, 2025). Although these are important in academic and professional contexts, they do not belong to the category of analytics tools aimed at extracting insights to improve institutional performance. This study, therefore, focuses on the first category—tools that serve the strategic objectives of enterprises.

4. Mechanisms and Dimensions Through Which Artificial Intelligence Contributes to the Development of Digital Activities

AI-powered digital analytics tools contribute to the development of enterprises' digital activities through several key dimensions, including process automation, customer experience enhancement, strategic decision-making improvement, and human capacity development.

4.1. Process Automation and Operational Efficiency Improvement:

Automation is one of the most prominent contributions of artificial intelligence, as AI tools perform routine and repetitive tasks automatically, reducing human errors and saving time and effort (Molly & Downie, 2025). Practical examples include:

- **Predictive Maintenance:** Organizations use Internet of Things (IoT) sensors and digital twins to monitor critical equipment, allowing AI systems to predict maintenance schedules or alert potential issues before they occur. This prevents unnecessary breakdowns and avoids high last-minute repair costs (Molly & Downie, 2025).
- **Invoice Automation:** Natural Language Processing (NLP) and Robotic Process Automation (RPA) technologies facilitate the processing of invoices and other documents, minimizing manual input errors and accelerating payment processes (Molly & Downie, 2025).
- **Supply Chain Optimization:** AI-driven analytics help accurately forecast demand and optimize inventory levels, reducing waste and improving operational efficiency (thecodest, 2025).

4.2. Enhancing Customer Experience and Providing Personalized Services:

AI enables companies to deeply analyze customer behavior and preferences, allowing them to deliver personalized products and services that precisely meet their needs. Key applications in this dimension include:

- **Chatbots:** Companies use AI-powered chatbots to provide instant responses to customer inquiries and round-the-clock support, improving overall customer experience and satisfaction (Bakka, 2025).
- **Smart Recommendation Systems:** In e-commerce, AI-based recommendation systems suggest personalized products for each customer based on past purchasing behavior and preferences, boosting sales and enhancing the shopping experience (Mustafa, 2025).

4.3. Enhancing Strategic Decision-Making:

Predictive analytics tools provide precise and timely insights, enabling managers to make more informed and accurate decisions instead of relying on intuition or outdated data (Omalytica, 2025). Applications include:

- **Market Volatility Prediction:** Banks and financial institutions use data analytics tools to forecast market fluctuations, helping them manage risks and make sound investment decisions (Omalytica, 2025).

- **Demand Forecasting and Expenditure Management:** By analyzing internal and external data, organizations can anticipate market variations accurately, plan production more effectively, and prevent stockouts (Molly & Downie, 2025).
- **Sentiment Analysis:** AI algorithms analyze texts and digital content to understand customer emotions and opinions about a specific product or service. This guides marketing campaigns more effectively and aids product development (Al-Shehri, 2025).

4.4. Developing Human Capabilities and Creating New Jobs:

The impact of AI is not limited to technical processes but extends to redefining professions and developing human skills (Me & Tahani, 2025). AI-driven analytics help organizations:

- **Skills Analysis:** AI can analyze workforce capabilities to identify potential skill gaps, enabling organizations to design targeted, data-driven training programs (Damenti, 2025).
- **Job Prediction:** Smart tools help predict which jobs are at risk of automation, allowing organizations to mitigate negative impacts by retraining and requalifying employees for new roles. This supports the notion that AI aims to enhance and augment human roles rather than completely replace them — a view shared by 87% of executives (Damenti, 2025).

5. Successful Models in the Use of Digital Analytics Tools:

This section supports the theoretical aspects with real-world examples from leading global and Arab enterprises, illustrating the tangible impact of AI-powered digital analytics tools.

5.1. Case Studies of Global Companies:

Global case studies serve as practical evidence of how AI-powered digital analytics tools can drive fundamental transformations in business models. By reviewing the experiences of pioneering companies, one can observe how these technologies have fostered innovation and competitive advantage worldwide. Examples include:

- **Coca-Cola:** The company used AI for sentiment analysis on social media to gauge positive and negative customer reactions to its products, enhancing its marketing strategies (Mohamed Salem Al-Darouli, 2024). In another application, Coca-Cola utilized Google's Vertex AI platform to analyze data from 700,000 vending machines in Japan, generating insights into consumer behavior and improving inventory management (Matsuda & Sato, 2015).
- **Nike:** The company employed AI and big data to offer personalized product recommendations through its apps and websites, increasing customer loyalty and boosting sales (AI Superior, 2025). These tools also optimized inventory management based on precise consumer preference forecasts (Loy, 2025).
- **Uber:** Uber heavily relies on AI data analytics to deliver a personalized user experience, optimizing ride timing and providing tailored recommendations for drivers and passengers (Mohamed Salem Al-Darouli, 2024).
- **Unilever:** The company implemented a comprehensive digital transformation using big data and AI to optimize its supply chain, forecast demand, improve inventory levels, and reduce processing times (thecodest, 2025).

5.2. Case Studies of Arab Companies:

The following Arab case studies illustrate how major regional corporations successfully integrated AI and digital analytics into their strategies, positively impacting performance and operational efficiency.

- **stc (Saudi Arabia):** In its 2024 Annual Report, stc highlighted the enhancement of its digital capabilities through the adoption of numerous advanced analytics use cases and **AI applications** across sectors. These initiatives included predictive AI and performance monitoring solutions, improving operational efficiency and service quality (stc, 2024).
- **e& (Etisalat UAE):** Etisalat released a white paper titled *“Unleashing the Power of AI,”* documenting over 400 AI use cases and 160 machine learning models. It also launched projects integrating AI into private cloud computing to enhance performance and reduce operational costs, thereby offering more reliable and innovative services (Etisalat, 2024).
- **Telecom Egypt (Egypt):** Telecom Egypt partnered with IBM and Red Hat to deploy AI and Robotic Process Automation (RPA) solutions within its infrastructure, cutting fault processing time from 18 hours to near real-time. The company also leveraged hybrid cloud computing and cloud automation tools to improve network responsiveness and customer experience — marking a major digital transformation in Egypt’s telecom sector (Zawya, 2023; TotalTele, 2023).
- **Zain Group (Kuwait / MENA Region):** In its 13th Annual Sustainability Report, Zain emphasized its efforts to enhance digital infrastructure and customer experience using data analytics and AI. The report confirmed the group’s commitment to closing the digital skills gap and creating sustainable value through technological innovation to strengthen competitiveness (Zain, 2024).

Table 01: Applications of Artificial Intelligence in Digital Analytics – Achieved Results in Companies

Company	Sector	Specific AI Application	Achieved Results
Coca-Cola	Marketing, Supply	Sentiment analysis, analysis of vending machine data	Improved marketing strategies, enhanced inventory management
Nike	Sportswear	Personalized product recommendations, inventory management	Increased customer loyalty, boosted sales, improved brand reputation
Uber	Transportation	Demand timing optimization, driver recommendations	Provided personalized user experience
Unilever	Consumer goods	Demand forecasting, supply chain optimization	Reduced inventory processing time, improved operational efficiency
STC (Saudi Arabia)	Telecommunications	Advanced analytics use cases, predictive AI	Enhanced operational efficiency, improved service quality
e& (UAE)	Telecommunications	Over 400 AI use cases and 160 ML models, AI in private cloud	Reduced operational costs, improved performance, delivered innovative services
Telecom Egypt	Telecommunications	Partnership with IBM and Red Hat: AI + RPA + Hybrid Cloud	Reduced fault processing time, improved customer experience
Zain Group (Kuwait)	Telecommunications	Data analytics and AI integrated into sustainability strategy	Enhanced digital infrastructure, improved customer experience, achieved sustainable value

Company	Sector	Specific AI Application	Achieved Results
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Source: Prepared by the researcher

Through the review of global and Arab case studies, it becomes evident that artificial intelligence (AI) has emerged as a key driver of digital transformation; however, its application varies depending on the context. Global corporations such as Coca-Cola, Nike, Uber, and Unilever have primarily employed AI to enhance direct competitiveness through customer experience improvement, product and service personalization, and supply chain acceleration. In contrast, Arab companies like STC, e&, Telecom Egypt, and Zain Group have focused mainly on using AI to strengthen digital infrastructure, increase operational efficiency, and enhance service sustainability. This reflects that the Arab context is still in the phase of consolidating digital foundations, whereas global firms have advanced to the stage of maximizing market value and innovation.

The cases also reveal that companies which have achieved the greatest benefit from AI are those that have integrated it deeply into their corporate strategy, rather than using it partially or experimentally. For instance, Unilever and e& developed comprehensive frameworks encompassing hundreds of use cases, while Uber and STC demonstrated that AI can radically reshape traditional business models.

These experiences confirm that the added value of AI is not limited to operational impacts (cost reduction, process acceleration) but extends to strategic ones (achieving sustainability, building long-term competitive advantage, bridging digital skill gaps). Hence, AI and digital analytics have become a **strategic imperative** for any organization aspiring to thrive in a fast-changing and highly competitive digital business environment.

6. Tools and Performance Indicators for Measuring Digital Activities

To ensure the effectiveness of AI-powered digital analytics tools, organizations must define measurable Key Performance Indicators (KPIs) and use specialized tools to collect and analyze data.

6.1. Key Performance Indicators (KPIs):

Organizations can adopt a variety of indicators to assess the impact of their digital activities:

- **Website Performance Indicators:** Include website traffic, bounce rate, average session duration, and pages per session (Jaija& Farah, 2023).
- **Digital Marketing Indicators:** Include click-through rate (CTR), conversion rate, cost per click (CPC), and return on investment (ROI) (Jaija& Farah, 2023).
- **Sales and Customer Service Indicators:** Such as average order value (AOV), number of calls, average response time, and returning visitors rate (Paul W. et al., 2016).

Indicator	Description	Measurement Benefit
Return on Investment (ROI)	The financial return ratio from digital investments.	Evaluating the efficiency of marketing campaigns.
Conversion Rate	Percentage of visitors performing a specific action (purchase, registration, etc.).	Measuring the effectiveness of campaigns in achieving objectives.
Click-Through Rate (CTR)	Percentage of clicks on an ad, link, or image.	Measuring the attractiveness of content and advertisements.
Bounce Rate	Percentage of visitors leaving after viewing only one	Assessing user experience and content

Indicator	Description	Measurement Benefit
	page.	quality.

Source: Prepared by the researcher

7. Leading AI-Powered Analytics and Measurement Tools

AI-powered analytics and measurement tools represent a major shift in managing digital activities. They allow organizations to efficiently collect data and transform it into actionable insights that enhance performance and support more accurate strategic decision-making. Among these tools, several standout models have proven highly effective in analyzing digital metrics and strengthening firms' competitive advantages.

7.1. Google Analytics (GA4)

Google Analytics is a leading tool in digital analytics and measurement, used to collect, process, and analyze data related to website visitor behavior. It works by embedding a code snippet on the website that gathers information about user activity—such as visited pages, duration of stay, and traffic sources—then presents this data in detailed reports. With its latest version, GA4, the tool has shifted from the “session-based” model to an “event-based” model, representing a major advancement in data analysis methodology (Kaushik, 2009).

Key Features of GA4 (Support Google, 2025):

- **Event-Based Model:** Every user interaction (click, scroll, video view) is considered an event, providing a more precise and unified cross-device behavior analysis.
- **Web and App Integration:** GA4 combines website and mobile app data into a single report, giving a holistic view of the customer journey.
- **Predictive Analytics:** Uses machine learning to predict future behaviors such as purchase likelihood or site abandonment, helping marketers identify high-value users.
- **Privacy-Focused:** Offers enhanced privacy controls and reduced reliance on cookies, complying with global data protection regulations.

7.2. Social Media Analytics Tools

Platforms like Facebook Insights, Instagram Insights, Snapchat Insights, and YouTube Studio are essential for monitoring digital activity. They provide key metrics such as views, likes, comments, engagement rates, and detailed demographic data (age, gender, location). These tools also track engagement trends over time, allowing marketers to evaluate campaign effectiveness and identify strengths and weaknesses.

Moreover, AI enhances these platforms by providing advanced analytics that go beyond numerical data. Algorithms analyze user behavior patterns, predict future trends, suggest optimal posting times, and recommend the most engaging content types. Machine learning enables the processing of massive data volumes in real time, uncovering hidden relationships between content and engagement. Through these capabilities, marketers can design more precise and effective strategies, improve content quality, enhance targeting strategies, and increase campaign efficiency.

7.3. Competitor Analysis Tools

Competitor analysis is a key element of digital development, allowing firms to understand market strategies and identify untapped opportunities. With AI-powered analytics tools, companies can now monitor competitors' digital performance more effectively and extract insights to improve SEO and strengthen marketing campaigns. Tools like BuzzSumo and Ahrefs are considered strategic assets for enhancing digital performance and achieving sustainable competitive advantage.

BuzzSumo:

A leading content analysis and trend-tracking tool across the web and social media. It helps marketers identify the most discussed topics, detect engagement patterns, monitor competitors, track backlinks, and discover influencers. Advanced features include real-time alerts, filtering by type, language, and time range—making it a powerful tool for supporting digital marketing strategies (BuzzSumo, 2025).

Main Features of Buzz Sumo:

- Trending content analysis
- Identification of successful content formats (articles, videos, infographics)
- Monitoring and alerts for specific keywords
- Competitor content analysis
- Influencer discovery by platform or country
- Question analysis from forums like Quora and Reddit
- Data exporting and trend reporting for strategic decision-making

Ahrefs:

Ahrefs is a top-tier competitor analysis platform used to track keywords and backlinks of competing websites. It helps marketers understand competitors' SEO strategies and discover untapped market opportunities. With AI integration, Ahrefs can process large datasets in near real time and uncover precise patterns invisible to manual analysis (Ahrefs, 2025).

Smart algorithms also deliver actionable insights, such as identifying high-value keywords or influential backlinks impacting site ranking. They link campaign success to specific tactics, marking a shift from passive monitoring to continuous optimization and data-driven decision-making. Thus, AI-powered tools like Ahrefs enhance firms' competitiveness and refine marketing strategies in an increasingly dynamic digital environment (Jarek& Mazurek, 2019).

8. Challenges and Risks

Despite their numerous benefits, AI-powered digital analytics tools are not without technical and ethical challenges and risks that must be addressed seriously.

8.1. Technical and Organizational Challenges

- **Big Data Volume:**

Managing massive amounts of data requires a robust infrastructure and high computing resources, which may pose a challenge for small and medium-sized enterprises (SMEs) (Ehsae, 2025). This challenge can be mitigated by relying on cloud computing.

- **Lack of Technical Expertise:**

Organizations often face a shortage of teams skilled in AI and data analytics, hindering full integration and utilization of these technologies (Mostafa, 2025). To overcome this, companies are offering training programs to upskill employees in using AI technologies.

- **Resistance to Change:**

Some employees may feel threatened by automation, leading to resistance and reluctance to adopt new technologies (Mostafa, 2025).

8.2. Ethical Risks and Privacy Issues

- **Algorithmic Bias:**

One of the major risks is algorithmic bias, where AI systems replicate and amplify existing biases found in their training data. For example, if historical hiring data is biased against a certain group, an AI-powered recruitment system will reinforce that bias, resulting in unfair decisions (Fazelpour& Lipton, 2020). Such bias can stem from unbalanced training data, leading to inaccurate or unethical outcomes (Michael, 2025).

- **Privacy and Data Security:**

- AI systems handle vast amounts of personal and sensitive data, making them vulnerable to security breaches and loss of privacy (Badman, 2025). Ensuring data security is therefore one of the biggest challenges to maintaining user trust.

- **Transparency and Accountability:**

Complex AI models are often “black boxes,” making it difficult to understand how they reach their decisions. This lack of transparency hinders legal accountability and reduces public trust in intelligent systems, highlighting the need to adopt the principles of *Explainable AI* (Fazelpour& Lipton, 2020).

Table 03: Key Challenges and Risks in AI Applications

Risk Category	Risk	Challenges	Proposed Solutions
Data	Data security, bias	Data breaches, unbalanced training datasets	Data governance, data auditing, encryption
Models	Lack of interpretability	Difficulty understanding model decisions	Use of Explainable AI
Processes	Skill shortages, resistance to change	Lack of trained teams, employee concerns	Investment in training, fostering an innovation culture
Ethics	Accountability and privacy	Biased decisions, privacy violations	Establish ethics committees, implement clear policies

Source: Prepared by the researcher

9. Conclusion

The study confirms that AI-powered digital analytics tools are not merely supportive technologies but key drivers of digital transformation that reshape how organizations operate and interact with their environments. The analysis demonstrates that these tools contribute to digital development by automating processes, enhancing operational efficiency, improving customer experience through personalized services, and supporting strategic decision-making based on accurate insights and reliable forecasts. They also play a role in developing human capital by analyzing employee skills and supporting reskilling efforts.

In addressing the research problem, the study concludes that these tools directly and effectively contribute to developing the digital activities of enterprises by transforming big data into valuable, actionable insights. They enable organizations to adapt to market changes, provide higher-quality services, and maintain a strong competitive position. However, institutions must remain aware of the challenges and risks associated with these technologies—particularly bias, privacy, and accountability—and adopt an ethical governance framework to ensure responsible and sustainable use.

Based on the findings, the study provides the following recommendations:

- Invest in employee training: Organizations should prioritize developing digital skills and AI expertise to maximize the benefits of these technologies.
- Start with small pilot projects: Instead of a full-scale transformation, it is advisable to begin with small, goal-oriented pilot projects to test AI capabilities before widespread implementation.
- Adopt cloud computing: To process and store big data flexibly and cost-effectively.
- Establish AI governance frameworks: Create ethics committees and implement clear policies to ensure transparency, accountability, and data protection.

Ethical Considerations

Only publicly available comments were analyzed. Usernames and identifiable information were not recorded. The study followed digital ethics guidelines to protect individuals from harm and ensure data confidentiality.

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