



**The Impact of Artificial Intelligence on project
Management.**

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Acknowledgments

I would like to acknowledge and give my warmest thanks to my supervisor Dr. Mona Elashry who made this work possible. her guidance and advice carried me through all the stages of writing my project. I would also like to thank my committee members for letting my defense be an enjoyable moment, and for your brilliant comments and suggestions, thanks to you.

Finally, I would like to thank ALLAH, for letting me through all the difficulties. I have experienced your guidance day by day. You are the one who let me finish my I will keep on trusting you for my future.

Dedication

This research project is dedicated to my Brother Ali Al-Bandary , whose unwavering love and support have been the driving force behind my academic pursuits. His/Her encouragement and belief in me have been a constant source of inspiration, and I am forever grateful for his/her guidance and wisdom.

Finally, I would like to dedicate this research to all those who have been affected by the subject matter of this study. It is my hope that this work will contribute to the advancement of knowledge and understanding in this field, and ultimately lead to positive change and progress.

Thank you all for your unwavering support and encouragement throughout this research project.

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Abstract

Using artificial intelligence for asset management enables continuous, real-time monitoring of devices and machines.

This allows faults to be diagnosed and predicted more accurately and quickly, allowing maintenance teams to act more quickly and efficiently.

AI identifies small anomalies that indicate potential failures and alerts maintenance teams to make necessary fixes before unplanned shutdowns occur.

This significantly reduces system downtime and increases availability.

Artificial intelligence helps in the collection, analysis, and interpretation of real-time data, enabling successful decisions in asset management, identifying critical points, prioritizing maintenance and investments, reducing costs, and increasing efficiency. It also helps to predict market trends and adapt quickly to demands, contributing to more efficient and strategic asset management.

Introduction:

AI is considered a superordinate concept for developments such as machine learning and deep learning.

Although narrower definitions abound, for the purposes of this study, any machine that can perform tasks that have previously been completed by a human supervisor is considered artificial intelligence.

The rapid adaptation of his AI programs in a variety of industries over the past decade means that programmers now have enough data and computational power to develop deep learning systems based on neural network research from the past decades.

This is due to the fact that it has As it stands, even the most sophisticated deep learning software can be incredibly efficient at one task for which it was trained, but completely useless at another. But while the coveted artificial general intelligence may still be years away, these learning systems are proving their benefits as the number of tasks they are assigned increases.[1]

Research Problem:

The research problem of this study is to empirically evaluate Artificial Intelligence's (AI) impact on managers. The impact is evaluated on the different aspects managers' work tasks may include, such as administration, supervision and leadership. In this study all people whose occupation is to lead people or manage operations are referred to as

managers, despite the varying ratios they perform these tasks. Rather than evaluating managers as a homogeneous group, they are divided to operative, middle and senior levels for a more precise evaluation.

Research Questions:

1. How the most recent breakthroughs in AI can also affect multiple highly skilled and highly paid occupations?
2. How AI sectors at the beginning of a large transformation caused by recent advances in machine learning?
3. How a lot of debate and polar opinions exist about what this means for different professions and for the future of work?

Research Objectives:

The aim is not to provide a certain forecast, but to compare possible future scenarios to better understand the phenomenon.

Research Hypotheses:

- There's a positive impact of Artificial Intelligence on project Management.
- There's no impact of Artificial Intelligence on project Management.

Research Methodology:

The study used the descriptive analysis research design from other recent studies and articles related to research topic.

Data Quality: Use this to analyze data and identify discrepancies, errors, and missing data to help organizations improve data quality and ensure that the data used in MIS is accurate and complete.

Helpful.

For example, natural language processing (NLP) algorithms analyze and clean unstructured data such as social media posts and customer feedback.

By automatically classifying and filtering this data, AI can help businesses identify patterns and trends that are difficult to detect manually, making data-driven decisions more efficient and accurate.

You will be able to.

Data Security: AI/ML can be used to detect and respond to security threats such as unauthorized access and data breaches.

This helps businesses improve data security and protect sensitive information.

AI can be used to analyze user behavior and identify anomalies that may indicate fraudulent or malicious activity.

Data Sharing: Use to integrate multiple systems and applications and share data more easily and efficiently.

This helps businesses streamline operations and improve collaboration.

Data Collection: AI can be used to automate data collection and analysis processes, reducing the need for manual intervention and increasing the speed and accuracy of analysis.

Data Analytics: AI-powered predictive analytics helps companies make more accurate, data-driven decisions and improve the efficiency and effectiveness of MIS systems.

Literature Review:

The role of technology in AI leadership and management in organizations has been recognized for some time.

AI can directly impact managers by replacing or enhancing certain work tasks.

AI can also impact managers indirectly through its impact on their work environments.

Therefore, the impact of AI can be divided into four levels: the social world level, the organizational structure level, and the managerial work task level.[2]

Based on empirical evidence, expert opinions on the impact of AI on management can be broadly divided into two groups: revolutionary and evolutionary.

Revolution Group believes that the unforeseen possibilities of AI technology will significantly disrupt the work of managers at all levels.

In the evolution scenario, AI continues to evolve and disrupt industries, although not as extensively as in the revolution scenario.

As industries continue to embrace the new possibilities of automation, the impact is not as strong for managers as it is for some workers.[3]

As society is built around working individuals, those whose tasks are automated will be retrained for new tasks created by AI, such as automated road and drone traffic monitoring.

The platform economy has not changed industries as much as initially expected, primarily impacting only a few new companies and industries.

Although algorithmic management is becoming more common, human management and oversight are still preferred, especially in traditional organizations.

While some repetitive monitoring and administrative tasks have been automated, the complementary effects of AI will enable business managers, middle managers, and senior managers to place greater emphasis on interpersonal leadership skills.

Executive and middle management will be affected somewhat more than upper management by the introduction of a somewhat flatter organizational structure.

The shift from management to leadership continues, and a large part of managers' responsibilities include tasks related to employee motivation, commitment, and satisfaction.

While technological advances continue in AI and other fields, the roles and responsibilities of leaders and managers are gradually evolving, but not becoming completely different.[4]

Although the speed of change in these scenarios varies, what they have in common is that the changes brought about by AI are not predetermined.

AI, like a hammer, can be used as a tool of creation or destruction.

While technological progress cannot and should not be stopped, better leadership is needed, perhaps now more than ever, to ensure it moves in the desired direction.

Although the rates of change in these scenarios vary, what they have in common is that the changes caused by AI are not predetermined.[5]

AI, like a hammer, is a tool that can be used for both creation and destruction.

While technological progress cannot and should not be stopped, better leadership is needed, perhaps now more than ever, to ensure it moves in the desired direction.

Leadership and management seem to be breaking new digital frontiers.

First, further research on the managerial impact of AI is recommended to identify the level of managers considered.

Since each group consists of very different tasks, AI affects each level differently.

Therefore, rather than viewing managers as a homogeneous group, analyzing each group separately may yield more accurate results.

Many factors have been found to influence organizational innovation, and the leadership style of administrators and managers has been identified as one of the most important factors.

Nevertheless, we found that little research has been conducted on the relationship between organizational innovation and top managers' leadership styles.[6]

The field of AI has made remarkable progress in recent years, particularly in areas such as machine learning and natural language processing.

These advances have had a transformative impact on businesses, increasing performance and productivity.

For example, Google used DeepMind to optimize energy consumption in its data centers, resulting in an impressive 40% reduction in energy costs.

AI is used in numerous applications in business, from machine learning, cybersecurity, customer relationship management, and data exploration to digital personal assistants.[7]

Machine Learning: Machine learning algorithms enable computers to learn and analyze large data sets, detect patterns, and make predictions.

This can be used for fraud detection, sentiment analysis, and demand forecasting.

Cybersecurity: Cybersecurity is a major concern in today's ever-evolving digital environment.

As cyber threats become more sophisticated, artificial intelligence (AI) is proving to be a powerful tool for detecting and mitigating these risks.

Through advanced algorithms, AI can effectively analyze network traffic, identify anomalies, and quickly respond to potential security breaches.

Customer Relationship Management (CRM): CRM systems, such as Salesforce's Einstein AI, use artificial intelligence to analyze customer interactions, preferences, and purchase history.[8]

This analysis enables personalized recommendations and increases overall customer satisfaction.

AI is used in various ways in corporate management.

It helps you automate daily tasks, analyze large amounts of data to generate insights for decision-making, improve customer experience with personalized recommendations, optimize supply chain operations, improve cybersecurity posture, and more.

Integrating AI into business processes offers a variety of benefits.

These include innovative pricing, customized recommendations, automated recruitment, improved customer support, enhanced cybersecurity, real-time analytics, and predictive analytics.

Innovative pricing: Companies like Uber use AI for dynamic pricing, which adjusts prices based on supply and demand.

This allows for optimal pricing strategies and increased sales.

Personalized Recommendations: Netflix uses AI algorithms to recommend movies and series based on your viewing history.

This improves user experience and increases customer loyalty.[9]

Automated Recruiting: AI can streamline hiring by reviewing resumes and shortlisting candidates based on predefined criteria.

This saves time and increases the efficiency of the recruitment process.

Improved cybersecurity: AI detects anomalies and potential security threats, enabling organizations to respond quickly.

This helps protect sensitive data and protects you from cyber-attacks.

Real-time analytics: AI allows businesses to analyze data in real-time and make timely decisions.

This capability enables agile decision-making and allows you to quickly respond to dynamic market conditions.

Predictive Analytics: AI can analyze historical data and predict future trends and outcomes.

This allows businesses to proactively identify opportunities and risks and make informed decisions.[10]

Challenges of Artificial Intelligence in Business

Despite the numerous benefits, implementing AI in business management comes with challenges. These include high initial investment costs, dependency on machines, skills shortage, and the risk of job displacement.

High Initial Investment Costs: Implementing AI technologies often requires significant upfront infrastructure, software, and talent investments. Small and medium-sized businesses may need help to allocate resources for AI integration.

Dependency on Machines: Relying heavily on AI can create a dependence on machines, making it essential to have backup plans in case of system failures or technical issues. Organizations must ensure they have contingency plans to maintain operations during downtime.[11]

Skills Shortage: The demand for AI professionals, such as data scientists and AI specialists, is snowballing. However, there is a need for more individuals with the necessary skills and expertise. Organizations may need help in hiring and retaining AI talent.

Job Displacement: Integrating AI technologies can lead to job displacement as specific routine tasks become automated. Organizations must plan and communicate effectively to mitigate potential job losses and provide training opportunities for employees to transition to new roles.

Transformational leadership, in contrast to transactional leadership, has been argued to be particularly effective in engendering followers' innovative behaviour. Innovation is central to the thinking about transformational leadership.[12]

As above, understanding what changes AI technology applications have brought to or would potentially bring to transformational leadership elements and the work of employees becomes a prerequisite step to take on the path to achieve success in innovation. Therefore, it is of this study's intention to dig deeper to create some new insights in this topic which firms would need in order to possibly set new strategies and reallocate their limited resources in the near future. Among different functions of an organization, we are especially interested in the R&D function due to the following reasons:

Organizations need to be on the lookout for innovative opportunities, as new disruptive technologies can make industries obsolete or put companies at risk.

The research and development department of a company is considered to be closely linked to innovation, which is the development and introduction of new products and services to the market.[13]

Therefore, R&D is the "backbone" for successful innovation.

Research and development typically requires huge strategic spending budgets, and the results can mean the difference between life and death for a company.

According to a 2019 report on the pharmaceutical industry, global drug R&D spending was \$165 billion in 2017 and is expected to grow at an annual rate of 3%, reaching a staggering \$204 billion by 2024.

AI was introduced to significantly improve research and development efficiency, creativity, and productivity.

One example is the application of AI in pharmaceutical companies' drug development processes, such as drug reuse, trial design, and safety prediction.

Very limited research has investigated the impact of leadership in R&D departments and management of aluminum applications.

We see this as a gap in the critical insights R&D managers need to plan and allocate resources to create and execute effective strategies for business success in the innovation space.

Moreover, in the field of R&D, little research has been conducted on leadership and innovation, which are important for the success of R&D operations because leadership behaviors play a role in motivating and guiding professionals.[14]

Conclusion:

However, there are several other challenges to using AI/ML in MIS, including the need for large amounts of high-quality data, the potential for bias in AI algorithms, and the need for specialized skills to implement and maintain AI. There are also challenges. /ML system. Overall, AI/ML has had a significant impact on MIS and will continue to change the way organizations make decisions.

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