

Enhancement in Business System Using Artificial Intelligence in Project Management

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Abstract

Artificial Intelligence has seen so much advancement in past decade and finds business and commercial use. Due to the development in the field of computer and IT, project management will get highly benefitted from it. A project performance activity depends on project management planning and assessment. A realistic – logical plan is important to handle project management efficiently. Lack of knowledge, skills, resources, and technology during project implementation results in the failure of the project. Artificial Intelligence can be defined as the machine's ability to imitate human behavior and taking decisions based on its cognizance. It has found new methods and techniques to allow project managers perform faster and more efficiently. In this paper, we will discuss the implementation of artificial intelligence in project management to improve its activities, critical issues involved, role in decision making and effect of human reasoning.

Keywords: - *Business and Commercial Use, Project Management, Lack of Knowledge, Imitate Human Behavior.*

INTRODUCTION

Artificial Intelligence has seen tremendous growth and application in recent years starting from daily used smart gadgets to self-driving vehicles. AI can be defined

as a machine which accepts inputs data from the real world processes it and makes specific decisions to achieve a goal. Project Management is one of the fields which will be highly impacted by Artificial

Intelligence. To track the progress of the project, a new monitoring and optimization tool can be developed. Most of the companies are using AI in project management.

Projectmanagement's challenges include timely delivery, keeping the project within the budget allocated and to keep the staff motivated. AI helps in projecting and recognizing emerging trends contributing more reasonable planning. It also provides the data-driven iteration required to analyse various approaches, their consequences and timeline. The key objectives are handling uncertainty and complexity and have a direct influence on project performance and exploring solutions to reduce them. Such changes can result in magnificent transformation in the nature of work and potential workforce demands.

Background

Artificial intelligence is a branch of software engineering which establishes enhanced intelligence within computer systems. Russel and Norvig defined AI as "the art of creating machines that perform functions that require intelligence when performed by people". Due to many advantages for the human-machine interconnected future, huge research and

development is going over the past few years. A huge portion of AI funding comes from Machine learning, since it properly learns strong data from diverse sources. It gets insights from the data to achieve intelligent decisions.

Project Management can be defined as a "temporary endeavor undertaken to create a unique product, service or result" [Project Management Institute]. Project management can also be considered having prominent functions concerned with "creating an environment where individuals can work together to accomplish a shared objective, in order to achieve successful projects on time and on budget." Here, the objective is to engage and control all stakeholders. It is necessary to create an environment which hosts teams or employees from the same or different organizations.

Heukamp et al. [24] formulated ten aspects wherein AI is changing management; moreover, Noponen addressed the effect of AI systems on management over the coming decade and found that AI will supplement human decision making, especially for top-level executives[25]. It is also deduced that AI is mainly examined in computer science and operation research to achieve better understanding of how

automation can influence our future, in brief, how AI cannot only automate processes but also strengthen the management domain [26].

Adequate PM is required for all forms of projects, with the intention of leading the project to completion while managing time, cost, scope, quality and personnel arrangements. Project managers work together with other stakeholders and track the entire workflow and focus on all aspects of the project such as labour, capital, time, equipment, material and risk to reduce the possibility of delays, budget overruns, and imminent contingencies.

Implementation

The demanding situations provided in literature overview and the extreme loss of powerful equipment affords a possibility

for AI to noticeably enhance the exercise of agile assignment control.

AI-primarily based totally equipment are capable of procedure huge quantities of information generated from software program projects, harvest beneficial insights, and teach to carry out complicated responsibilities consisting of estimating effort, mission refinement, useful resource control, and dash making plans. With the need for automation, ML algorithms are used to learn the data to be integrated into PM software.

It helps in decision making and insights analysis rather than relying on human intuition. With a data- driven approach, it will work on the project problems and empower project managers to get the hidden knowledge from the project experiences to be automated [18].



Figure 1: The evolution of AI in PM [20]

AI catboats, assistants, and algorithms can give project managers the support by examining the project status and giving insights and forecasts of the data. The evolution shown in figure 1 starts with the simple definition of AI; machine learning applied in the field of PM which enables analytical and predictive analysis to give data for decision-making process to schedule and handle project resources and cope up with challenges and risks in the field. AI helps project managers in strategic and business management. Project managers will get more assistance, productivity and control.

If organizations and project managers use AI systems diligently, it will certainly result in significant difference in value delivery. AI programs help in cost forecast, manage plans, track progress, send flags, updates and follow-ups and manage resources. Hence, project managers can focus on team members and more complicated tasks. The benefit is that there is less documentation required the ones which are used for quick design and development along with the necessary test data. It helps in verifying and validating the requirements, and focusing more on the application rather than documentation.

CONCLUSION

The rise of Artificial intelligence (AI) has the potential to significantly transform the practice of project management. Project management has a large socio-technical element with many uncertainties arising from variability in human aspects, e.g. customers' needs, developers' performance and team dynamics. AI can assist project managers and team members by automating repetitive, high-volume tasks to enable project analytics for estimation and risk prediction, providing actionable recommendations, and even making decisions. AI is potentially a game changer for project management in helping to accelerate productivity and increase project success rates.

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