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Role of AI in Improving Decision Making in Daily Human Activities

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Abstract: ***Artificial Intelligence (AI) has become a key tool that helps improve decision-making in many everyday tasks that people do. This paper examines how AI aids both individuals and organizations in making faster, more informed, and more accurate decisions in everyday life. By analyzing large amounts of data, identifying patterns, and generating useful insights, AI enables people to make informed choices. The importance of AI in decision-making is increasing because there's a growing need to handle more complex choices in areas such as healthcare, finance, education, transportation, and personal task management. AI-powered applications provide users with suggestions, predictive insights, and automated support, thereby minimizing manual tasks and reducing the risk of errors. For example, in healthcare, AI helps doctors diagnose illnesses and plan treatments; in finance, it assists individuals in tracking their spending, identifying fraudulent transactions, and making informed investment decisions. Intelligent assistants, navigation tools, and recommendation engines help make everyday choices easier. The results show that AI significantly enhances the speed, accuracy, and reliability of decisions, thereby increasing human productivity and improving the overall quality of life***

Keywords: Artificial Intelligence, Decision Support, Data Analytics, Intelligent Systems, Everyday Application, Automation.

I. INTRODUCTION

Artificial Intelligence, or AI, is part of computer science that works on making machines and systems do things that usually need human thinking. These tasks involve learning from data, spotting patterns, understanding language, solving problems, and making choices. AI technologies employ algorithms, machine learning models, and extensive datasets to process information and derive valuable insights.

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In recent years, artificial intelligence has grown very quickly and is now a key part of many modern digital systems and applications.

Making decisions is a basic and important part of how people live their daily lives. Individuals continuously make decisions related to health, education, finance, transportation, shopping, and communication. Some choices are easy and everyday things, but others are harder and need you to look at all the possible ways to decide. Choosing the best option usually relies on having good information, being able to look at different choices, and having enough time to think about the results. However, humans may sometimes struggle with processing large amounts of information or predicting future consequences, leading to errors or less effective decisions.

Artificial Intelligence is getting more and more important in helping and making human decisions better. AI systems can look at a lot of data fast, find patterns in that data, and give suggestions using models that predict what might happen. These abilities allow people and groups to make smarter, more correct, and quicker choices. For example, AI is used in healthcare to help doctors diagnose diseases, in finance to spot fraud and analyze investments, and in everyday digital tools like navigation apps and personalized recommendations. As AI technology keeps getting better, it helps people make better decisions and makes everyday life better overall.

II. LITERATURE REVIEW

Many experts have looked into how Artificial Intelligence (AI) can help make better decisions in various fields. AI-based decision support systems are often studied because they help people and groups look at a lot of data and make better choices. According to previous research, Decision Support Systems (DSS) combined with AI techniques like machine learning and data analytics are capable of handling complex datasets and offering recommendations that help users choose the best solutions. These systems are especially helpful when human decision makers have too much information or aren't sure about the right choice.

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In the healthcare sector, numerous studies highlight the increasing adoption of AI for clinical decision support. Scientists have found that AI systems can look at medical records, X-rays, and other patient information to help doctors spot illnesses and suggest the best ways to treat them. This helps prevent mistakes in diagnosis and makes the care for patients better. In the financial sector, AI technologies are employed for fraud detection, risk assessment, and investment analysis. Studies show that financial systems using AI can look at market trends and how money is spent to help make better financial choices.

AI is also used in education to help create personalized learning experiences and make better decisions about students' academic progress. Intelligent tutoring systems and learning analytics help teachers see how students are doing and offer personalized learning suggestions. Studies indicate that AI-driven systems enhance learning outcomes and improve educational planning.

Studies so far show that AI helps people make better decisions by offering useful information based on data, predicting future trends, and suggesting smart choices automatically. However, many researchers also emphasize the need for responsible use of AI to ensure transparency, reliability, and ethical decision-making processes.

III. OBJECTIVS

To learn about the idea and growth of Artificial Intelligence and see how it is used in various parts of everyday life.

AI helps people make better decisions by looking at a lot of data and giving clear suggestions.

To identify the major areas where AI assists in decision making, such as healthcare, finance, education, transportation, and digital services.

To look at how AI helps in making decisions, like making things more accurate, faster, better at getting things done, and less likely to have mistakes from people.

To understand the difficulties and problems with using AI for decision support, like problems with keeping data private, worries about ethics, and relying too much on technology.

To check how much AI helps make better decisions in daily life.

IV. RESEARCH METHODOLOGY

This part explains the different ways the study was carried out to look at how Artificial Intelligence helps people make better decisions in their everyday lives. The method describes how the research was set up, the ways data was gathered, and the processes used to analyze the data.

A. Research Design

The study employs a qualitative and descriptive research design. The goal of this design is to learn how AI tools help people make smarter choices in their daily lives. The study looks into what is already known about AI, the ideas behind it, and how it is used in various areas like healthcare, finance, education, and everyday digital services. A detailed method is used to look at how AI tools help people make decisions and make their work faster and more accurate.

B. Data Collection Methods

The research primarily uses secondary data sources. Information is gathered from academic journals, research papers, books, conference presentations, and other trustworthy websites that discuss Artificial Intelligence and decision support systems. These sources give important information about how AI is used in everyday situations and how it affects the way people make decisions. Different industries have case studies and examples that show how AI technologies are actually used in real situations. These are looked at to better understand the practical application of AI.

C. Data Analysis Methods

The collected information is analyzed using a qualitative analysis approach. Information from different places is checked, looked at together, and understood to find out what is similar and what happens often when AI is used to make decisions. The analysis focuses on understanding how AI tools offer data-driven insights, predictive analysis, and recommendations to support human decision-making. The benefits and difficulties of using AI in decision support systems are also looked at to give a fair view of the subject.

The research method allows for a clear and organized way to look at how Artificial Intelligence can help people make better decisions in their everyday lives.

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V. ROLE OF ARTIFICIAL INTELLIGENCE IN DAILY HUMAN DECISION MAKING

Artificial Intelligence (AI) has become a key tool that helps people make smarter and quicker choices in their daily tasks. AI helps people and groups make good decisions by looking at a lot of data, finding patterns, and coming up with helpful ideas. The integration of AI minimizes human effort, enhances accuracy, and facilitates data-driven decision making across various aspects of everyday life.

A. AI in Healthcare

In the healthcare field, AI helps doctors and medical staff make better and more accurate decisions when it comes to patient care. AI systems can look at patient records, medical pictures, and lab test results to find patterns that are connected to illnesses. For instance, AI-powered diagnostic tools can assist in identifying conditions like cancer, heart disease, or diabetes at an early stage. These systems give suggestions that help doctors choose the right treatment options. So, using AI helps doctors make more accurate diagnoses, lowers the chance of mistakes in medical treatments, and makes healthcare better for patients.

B. AI in Financial Planning

Artificial intelligence is widely used in financial planning and personal finance management. AI-based apps look at financial information, how people spend money, and what's happening in the market to help people make smarter money choices. For example, AI tools used in banking and investment platforms can recommend appropriate investment options, identify fraudulent activities, and help with budgeting. AI helps people handle their money better by giving them predictions and doing financial analysis automatically, which makes it easier to avoid financial problems.

C. AI in Education

AI is also changing how education works by helping to create personalized learning experiences and making better decisions about students' academic paths. AI-powered educational platforms look at how students perform, how they learn, and how much they progress. They use this information to suggest the best study materials and learning methods for each student. Intelligent tutoring systems can guide students by identifying their strengths and weaknesses. Teachers and educational institutions can also utilize AI analytics to enhance teaching methods and develop more effective educational strategies.

D. AI in Personal Productivity

AI assists people in their everyday tasks, helping them work smarter and use their time better. AI-powered tools like digital assistants, recommendation systems, and scheduling apps help people manage their tasks and make everyday decisions more easily. For example, smart assistants can remind users of meetings, suggest travel routes considering traffic conditions, and recommend products or entertainment content based on personal preferences. These features allow people to save time and make easy decisions in their everyday lives.

E. AI in Workplace Decision Making

Artificial intelligence is widely used in workplaces to support organizational decision making. Companies use artificial intelligence to look at big sets of data about how customers act, how well they sell products, and what's happening in the market. This analysis assists managers in making smart choices about marketing, creating new products, and distributing resources effectively. AI helps in hiring by looking at job candidates' information and finding the best matches for the job. By offering data-driven insights, AI helps organizations make more efficient and informed decisions.

VI. SUMMARY

Overall, Artificial Intelligence greatly helps people make better decisions in many parts of everyday life. By offering data-driven insights, predictive analysis, and automated recommendations, AI enables humans to make quicker, more accurate, and more reliable decisions. As AI technology keeps getting better, its role in helping people make decisions is likely to become even more crucial in the future.

Artificial Intelligence's effectiveness in improving decision-making is noteworthy :

The implementation of AI technology has significantly altered the way people make decisions in their daily lives. These artificial intelligence systems use advanced tools and data analysis techniques to comprehend information quickly and efficiently. People and groups can benefit from AI's ability to provide them with valuable information, resulting in better decisions.

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1) AI's speed of data processing is a significant advantage, as it can help people make decisions more quickly by analyzing information faster. For instance: navigation apps use real-time traffic updates to show the most efficient way to reach e certain sites, saving time for those on their way.
2) The accuracy and precision of data analysis in AI help to reduce human error. Machine learning algorithms can detect patterns and trends that are beyond the human eye. In healthcare, AI tools enable doctors to diagnose illnesses with greater precision by analyzing medical images and patient information.
3) People use AI to make decisions by analyzing data and current events, which helps them make better decisions for future planning and investment. In finance, systems that use artificial intelligence analyze market patterns and investor behavior to assist individuals in making informed financial decisions about their money.
4) AI systems can analyze human behavior and preferences to provide personalized recommendations. This helps people make better decisions about their purchases. E-commerce sites can use artificial intelligence to suggest products based on an individual's past and browsing history.
5) AI performs repetitive tasks and offers speedy advice, enabling individuals to allocate more time for essential tasks. In the workplace, AI tools analyze business data and assist managers in making informed decisions about sales, marketing, and operations, which enhances productivity.
6) AI systems can detect potential risks by analyzing data and patterns. This allows individuals and groups to act quickly, preventing problems from occurring. Banks use AI technology to identify irregular transaction patterns and prevent financial fraud.

VII. CHALLENGES AND LIMITS OF ARTIFICIAL INTELLIGENCE FOR DECISION MAKING

Even though AI offers many advantages in making decisions, it also has several limits and challenges that need careful attention to make sure AI tools are used properly in everyday life.

A. *Data Privacy and Security*

The main challenge in using AI is keeping personal information safe. This is especially crucial because AI systems require access to substantial volumes of data, which can include personal, financial, or medical information. If this doesn't work, privacy might be at risk or someone could get in without permission, which could lead to big problems. For example, AI systems in healthcare or financial services might keep private user data without letting people know.

B. *Bias in Algorithms*

Another major limitation of AI is the potential for bias in algorithms. AI systems can make unfair choices if they learn from old information, like when they pick someone for a job, approve a loan, or decide on a medical treatment.

C. *Reliability and Accuracy Issues*

AI can look at a lot of information and give useful ideas, but it might not always work perfectly. If the data used to create the AI model has mistakes, the AI might make errors. The system could give wrong predictions or advice. Putting faith in AI choices without checking with a person can result in serious problems when key points are involved.

D. *Ethical Concerns*

The application of AI in decision-making processes raises ethical concerns. Problems with who is responsible, how clear things are, and whether things are fair often happen when AI systems make choices that affect people's lives. For instance, if an AI system picks the wrong option in healthcare or finance, it can be hard to figure out who is to blame for the results. So, there are clear rules and helpful ways to use AI properly to make sure things are fair and reliable.

E. *Dependence on Technology*

Another problem is that people are becoming more reliant on AI systems. Over-reliance on machines can strip people of their decision-making authority and prevent them from cultivating deep, reflective thinking skills. If an AI system has technical problems or software issues, users might not be able to make their own decisions without the help of artificial intelligence.

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VIII. FUTURE SCOPE OF ARTIFICIAL INTELLIGENCE IN IMPROVING HUMAN DECISION MAKING

Artificial Intelligence is always getting better and is likely to become even more important in helping people make better decisions in the future. As technology keeps improving quickly with things like machine learning, deep learning, big data analysis, and the Internet of Things (IoT), AI systems are getting smarter, more accurate, and better at helping with difficult decisions. These advancements will allow individuals and organizations to make quicker and more informed decisions across various areas of daily life.

One key future idea is combining AI with smart devices and digital assistants. As smart homes, wearable technologies, and connected devices become more prevalent, AI will be able to analyze real-time data from various sources and offer personalized recommendations. For example, health systems that use AI can predict possible health issues and recommend steps to prevent them, which helps people make smarter choices about their lifestyle and medical care.

In the financial world, future AI systems will likely offer better predictive analysis and more tailored financial planning. AI tools can analyze market trends, user behavior, and economic indicators to assist individuals in making better investment and financial management decisions.

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In education, AI-driven learning tools are expected to provide very tailored learning experiences by adjusting teaching approaches to suit each student's specific needs and how they perform.

In work places and business settings, AI will help managers with planning strategies, distributing resources, and predicting market trends. Advanced AI systems can also support collaborative decision making by integrating human expertise with machine intelligence. Also, better explainable AI and ethical AI systems will make sure that decisions made by AI are clear, fair, and reliable.

The future potential of Artificial Intelligence in decision making is extensive. As technology keeps getting better, AI will become a strong tool that helps human intelligence, makes decisions better, and helps people make choices that are more efficient and well-informed in their everyday lives.

IX. CONCLUSION

Artificial Intelligence (AI) has become a strong tool that helps and makes better decisions in everyday activities people do. This study looked at how AI helps people and groups by looking at a lot of data, finding patterns, and giving helpful information to make better decisions. The research talked about how AI tools are being used more and more in key areas like healthcare, planning money matters, teaching students, helping people stay organized, and managing work environments.

The results of this study show that AI enhances the speed, accuracy, and efficiency of decision-making processes. AI systems help minimize human errors, offer data-driven recommendations, and support in forecasting future outcomes. In healthcare, AI helps doctors identify illnesses and create treatment plans. In finance, it assists people in handling their investments and spotting any dishonest or illegal actions. In education, AI facilitates personalized learning and enhanced academic planning. AI tools help people work more efficiently and support important business decisions in the workplace.

The study also points out some challenges, like worries about data privacy, biased algorithms, dependable results, and ethical problems. These challenges highlight the necessity for responsible development and appropriate regulation of AI technologies.

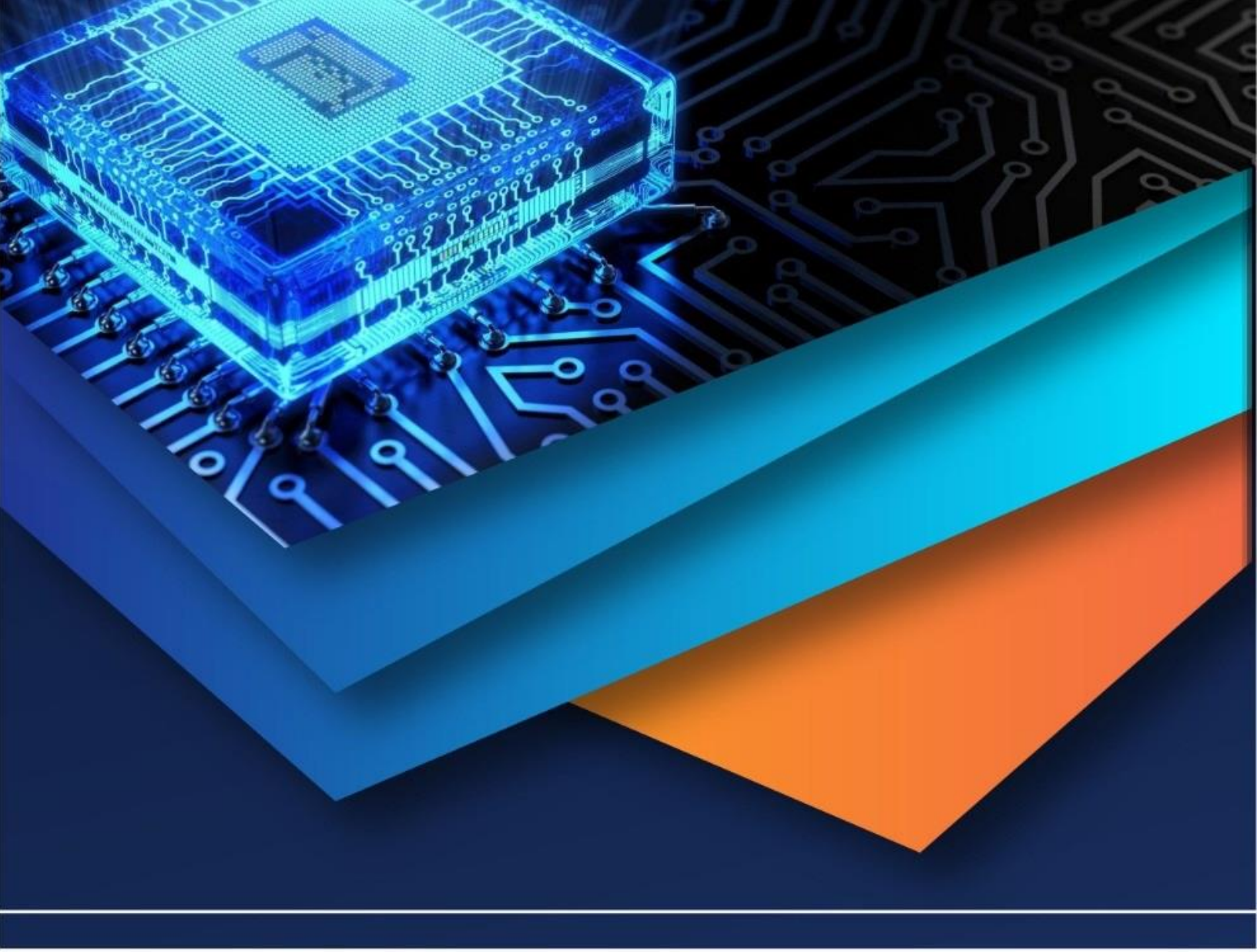
In short, Artificial Intelligence helps people make better decisions by offering smart support and powerful tools for analyzing information. As AI technology continues to advance, it is anticipated to further enhance the quality and effectiveness of decisions in everyday human life.

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