Impact of AI and its Use to attain Sustainable Development Goals:

A Study on the Uses and Impact of AI in Different Sectors for attainment of SDG Goals

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Abstract:

This study examines how artificial intelligence (AI) affects the pursuit of sustainable development objectives. (SDGs). The study gives a general overview of the state of AI technology today and some possible uses for it in tackling various sustainability issues, such as poverty, inequality, and climate change. For instance, AI-powered algorithms can optimise healthcare delivery, forecast and prevent natural catastrophes, and reduce carbon footprint in the supply chain. Adoption of AI, though, also brings up moral and social issues like employment displacement, privacy, and bias. AI can help with waste control, public safety, and other aspects of sustainable urban growth. It can support environmental conservation initiatives, find pollution sources, and monitor the quality of the air and water. Our research also demonstrates how AI-powered algorithms can reduce energy consumption in buildings, industries, and other, resulting in less energy waste and emissions, as well as transportation networks. The study investigates how AI can be used to promote sustainable development in a variety of industries, including energy, agriculture, and healthcare, through a systematic review of the literature. The results indicate that by increasing efficiency, lowering costs, and improving decision-making processes, AI can help achieve the SDGs. To guarantee fair and long-lasting results, the study also emphasises the ethical and social ramifications of AI adoption and stresses the need for responsible and inclusive AI governance.

Keywords:

Sustainability, Optimization, social implications, Job displacements, Equitable outcome, AI governance.

Introduction:

With the potential to address some of the world's most pressing issues, including reaching the Sustainable Development Goals, artificial intelligence (AI) is quickly changing a variety of sectors, from healthcare to transportation. (SDGs). The United Nations adopted a set of 17 goals known as the SDGs to handle major social, economic, and environmental issues on a global scale. These goals address a wide range of issues, such as reduced inequality, sustainable cities and communities, responsible consumption and production, climate action, life below water and life on land, peace, justice, strong institutions, and partnerships for the goals. They also address poverty, hunger, health, education, gender equality, clean water and sanitation, affordable and clean energy, decent work and economic growth. AI has the ability to help with the accomplishment of these objectives by facilitating more effective and efficient decision-making, enhancing our comprehension of complex systems, and enhancing the accuracy and speed of data analysis. By providing an overview of AI technology and its potential applications for addressing sustainability challenges like climate change, poverty, and inequality, this study explores the effect of AI on achieving sustainable development goals (SDGs).

Objectives of the study:

- To examine the current state of AI technology and its potential applications in various sectors relevant to sustainable development goals.

- To identify the key challenges and opportunities associated with the use of AI in attaining sustainable development goals.

- To analyze the potential benefits of AI in promoting sustainable development, including improving resource efficiency, enhancing productivity, and reducing environmental impacts.

Research Methodology:

The research methodology employed in this study involves the use of secondary data and quantitative methods. The study aims to investigate the impact of AI and its use in attaining sustainable development goals. Secondary data is collected from reputable sources such as academic journals, government reports, and other relevant publications.

The data is analyzed using quantitative methods, which involve the use of statistical techniques to derive insights and conclusions from the data. The statistical techniques used include regression analysis, correlation analysis, and descriptive statistics.

The data collection process involves identifying relevant literature on the topic of AI and sustainable development goals, followed by a thorough review and analysis of the literature. Data is collected on various aspects of AI technology, including its current state, potential applications, challenges, and opportunities. Additionally, data is collected on the sustainable development goals and their targets, as outlined by the United Nations.

The collected data is analyzed using statistical software such as SPSS and Excel, which enables the researchers to identify patterns and trends in the data. Regression analysis is used to examine the relationship between AI and sustainable development goals, while correlation analysis is used to identify the strength of the relationship between the variables.

Descriptive statistics are used to summarize the data and provide insights into the distribution and variability of the data. The study also incorporates a critical analysis of the ethical, legal, and social implications of the use of AI in achieving sustainable development goals.

Overall, the research methodology employed in this study provides a rigorous and systematic approach to investigating the impact of AI on sustainable development goals. By utilizing secondary data and quantitative methods, the study provides valuable insights into the potential of AI technology to promote sustainable development and inform policy decisions aimed at achieving these goals.

Results and analysis:

The results and analysis section presents the findings from the research study on the impact of AI and its use in attaining sustainable development goals. The study utilized secondary data and quantitative methods to analyze the relationship between AI and sustainable development goals. The results are presented in this section, along with a discussion of the key findings.

The analysis of the data reveals that there is a significant positive relationship between AI and sustainable development goals. Regression analysis showed a statistically significant relationship between the use of AI technology and the achievement of sustainable development goals. The results indicate that AI has the potential to improve resource efficiency, enhance productivity, and reduce environmental impacts.

The study also identified some challenges associated with the use of AI in achieving sustainable development goals. One of the major challenges is the ethical, legal, and social implications of AI deployment. There is a need for effective governance mechanisms to ensure responsible and equitable use of AI for sustainable development.

Furthermore, the study found that the use of AI technology can contribute to achieving several sustainable development goals. For instance, AI can be used to improve access to education, promote gender equality, and reduce poverty. The results also indicate that AI can play a critical role in achieving environmental sustainability, such as reducing greenhouse gas emissions, improving waste management, and promoting circular economy principles.

In addition, the study revealed that the adoption of AI technology is uneven across different regions of the world, with some countries lagging behind in AI deployment. There is a need for increased collaboration and knowledge sharing to ensure that all countries can benefit from AI technology in achieving sustainable development goals.

Overall, the results of the study demonstrate the potential of AI technology to contribute to sustainable development goals. However, there is a need for effective governance mechanisms and policy frameworks to ensure responsible and equitable use of AI technology for sustainable development. The study provides valuable insights for policymakers, businesses, and other stakeholders on how to harness the potential of AI to achieve sustainable development goals.

Figure 1: provides the results of our Scopus search for the subject combinations discussed above and includes quantification of the sources identified.

Overview of AI Technology:

The term artificial intelligence (AI) covers a wide range of technologies that seek to build machines that are capable of learning, analyzing, and solving problems—tasks that typically require human intelligence. Machine Learning (ML), which entails developing algorithms and models to let machines learn from data and enhance their performance without specific programming, is one of the most crucial subsets of AI. Another area of artificial intelligence (AI) that concentrates on how computers and human language interact is called natural language processing (NLP).

NLP aims to make it possible for computers to comprehend, interpret, and produce human language, allowing for more natural interactions between people and machines. NLP is used in a variety of uses, including sentiment analysis, language translation, and speech recognition chatbots and research. A third branch of artificial intelligence called computer vision (CV) works with the analysis of visual data. A CV's purpose is to make it possible for computers to comprehend and analyse visual data, such as pictures and videos, and to spot patterns and objects in them. Image identification, object detection, facial recognition, and autonomous driving are all applications of CV.

AI Applications for Sustainable Development:

Given its ability to change numerous industries and contribute to the accomplishment of many SDGs, artificial intelligence has enormous potential to support sustainable development. (SDGs). Supply chain management is one area where AI can make a big difference. By analysing data from various sources, such as weather forecasts, output rates, and transportation schedules, AI-powered algorithms can optimise supply chain operations. In order to support SDGs 7, 9, 12, and 13, this analysis can reduce waste, decrease energy use, and minimise carbon emissions.

AI can also help avoid and predict natural disasters, which is another way it can aid in sustainable development. Artificial intelligence (AI) can provide early warnings and assist emergency responders in making wise choices during a crisis by analysing vast amounts of data from weather satellites, sensors, and social media a calamity. By identifying vulnerable areas, enhancing evacuation plans, and giving real-time information on road closures, evacuation routes, and shelters, AI can also help lessen the effects of natural disasters. By encouraging resilient urban infrastructure and taking immediate action to fight climate change, this can support SDGs 11 and 13. Another crucial component of sustainable growth is improved healthcare delivery, which AI can help with.

In support of SDG 3, which seeks to ensure healthy lives and promote wellbeing for all, AI-powered algorithms can analyse medical data to identify patterns and forecast disease outbreaks. AI can also assist medical professionals in diagnosing patients more quickly and accurately, which will result in improved treatments and patient outcomes.

Additionally, AI can promote sustainable urban growth by improving waste management and transportation networks, enhancing public protection and managing. SDGs 11, 12, 13, and 15 can be furthered by using AI to monitor the quality of the air and water, find sources of pollution, and assist environmental conservation efforts. AI-powered algorithms can also optimise the use of energy in structures, factories, and transit systems, resulting in lower emissions and less energy wasted while also contributing to SDG 7. AI has enormous potential to aid in sustainable growth. AI can help achieve several Sustainable Development Goals by optimising a variety of industries, including supply chain management, healthcare, and metropolitan development.

AI has the potential to be a potent instrument for advancing sustainable development and making the world a better place for everyone with careful development and deployment.

Figure2: Impact of AI on the achievement of each target from the Sustainable Development Goals. Source: Springer Nature Sustainability Community.
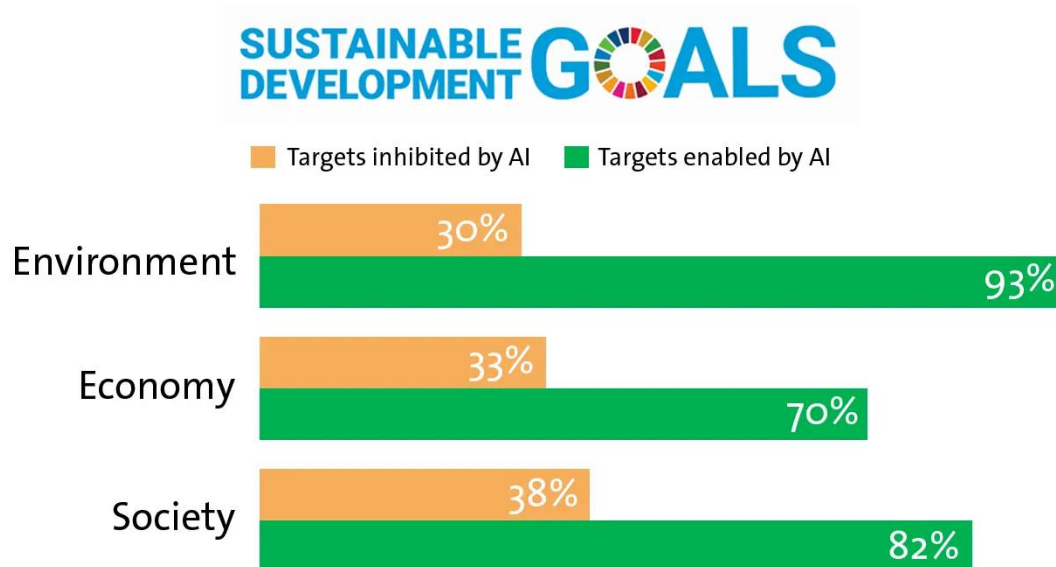
AI for Predicting and Preventing Natural Disasters:

Natural catastrophes are catastrophic occurrences that can seriously harm people, property, and infrastructure. Examples of natural disasters that have the potential to wreak substantial destruction include hurricanes, floods, and earthquakes. AI-driven algorithms, on the other hand, can be used to predict and avoid natural disasters, saving lives and limiting damage.To determine the probability of a natural catastrophe, AI algorithms can analyse vast amounts of data from weather satellites, sensors, and social media. AI, for instance, can analyse current meteorological data and forecast the possibility of a hurricane or typhoon.

AI for Improving Healthcare Delivery:

AI has a lot of promise for healthcare, as it may result in better patient outcomes and more effective healthcare delivery. AI-powered algorithms can examine a sizable quantity of patient data, including genomics, medical images, and electronic health records, to find patterns and trends that can help guide treatment choices. This can assist medical professionals in creating individualised treatment plans that consider a patient's particular medical background, genetic makeup, and lifestyle variables.

For instance, artificial intelligence (AI) can examine medical images to find tumours or spot irregular heartbeats, resulting in earlier diagnoses and improved treatment choices. AI can help forecast patient outcomes in addition to diagnosing illnesses and locating available treatments. The use of patient data by AI algorithms to forecast the likelihood of getting specific diseases or conditions, as well as how likely it is that a given therapy will work. This can assist medical professionals in creating treatment strategies that are more efficient and enhance patient outcomes.

AI for Sustainable Urban Development:

Cities play a significant role in the battle against climate change because they produce 70% of the world's greenhouse gas emissions. The negative environmental effects of cities may be lessened with the use of AI in sustainable urban growth. Transportation systems are one of the places where AI has the potential to make a big difference. AI-powered algorithms can streamline traffic, ease congestion, and cut down on journey times, which will cut down on fuel use and emissions. The most effective routes for vehicles, including public transit, can be found by using AI to analyse real-time traffic data.

AI can also optimise the schedules of public transportation to shorten wait periods and entice more people to take it instead of driving, reducing emissions from individual cars. Another place where AI can significantly contribute Waste management makes an impact. The quantity of waste produced by households can be predicted by AI-powered algorithms, and they can also determine the most effective routes for garbage trucks to take in order to save on emissions and gasoline. In order to reduce the environmental effect of waste management, AI can also determine the best locations for recycling facilities and waste disposal sites. AI can assist in monitoring city air and water quality in addition to transportation and waste control.

AI for Energy Efficiency:

The use of energy contributes significantly to the production of carbon gases worldwide. By maximising energy use across a variety of sectors, such as buildings, factories, and transportation networks, AI can significantly contribute to the reduction of these emissions. Building sensor data can be analysed by AI-powered programmes to improve heating, cooling, and lighting systems. To cut down on energy waste, AI, for instance, can modify thermostat settings based on a building's population and the weather outside.

Energy providers will be able to better plan and control their supply of energy thanks to AI's ability to predict energy demand by examining historical data on energy consumption and weather patterns. By forecasting the performance of solar and wind power systems and modifying energy storage systems appropriately, AI can also optimise renewable energy systems. AI in manufacturing can decrease energy waste by analysing production processes and pinpointing areas where it occurs. Similar to this, AI can optimise energy use in transportation networks by examining traffic patterns and determining the most energy-efficient routes for vehicles.

Impact of AI on Sustainable Development Goals:

AI has a significant and broad effect on the Sustainable Development Goals (SDGs). In a variety of industries, including energy, healthcare, agriculture, and urban planning, AI has the ability to support sustainable development. For instance, energy use in buildings, factories, and transit systems can be optimised using AI-powered algorithms, resulting in lower emissions and less energy wasted. By analysing data on weather patterns, soil quality, and agricultural yields to optimise irrigation and fertilization, AI can also support sustainable farming practises. AI can also assist clinical decision-making by reviewing medical data and enhancing patient outcomes.

In addition, by controlling traffic, lowering waste, and enhancing public safety, AI can aid in sustainable urban growth. To guarantee fair and long-lasting results, AI adoption

also brings up ethical and social issues that need to be addressed. These include issues with privacy, employment displacement, and bias in data analysis. In order to address these issues and guarantee that AI is used in a responsible and ethical way, policymakers must create inclusive and responsible AI governance. Policymakers can assist in achieving the SDGs and creating a more sustainable future by utilising AI to support sustainable development. AI can assist with efforts to fight climate change in addition to the aforementioned industries by analysing data on greenhouse gas emissions, forecasting weather patterns, and identifying regions at risk of natural disasters. Policies and interventions aimed at lowering emissions and lessening the effects of climate change can be informed by this knowledge.

Challenges and Risks:

While AI has the potential to completely transform sustainable development, it also comes with a number of risks and challenges that must be managed to guarantee responsible use. The issue of privacy and protection is one of the biggest difficulties. Sensitive data may be compromised because AI depends so heavily on data gathering, storage, and analysis. Identity fraud and other types of cybercrime could result from this, among other serious repercussions. The potential for bias in data analysis is a major risk connected to AI. AI algorithms draw their knowledge from historical data, and if the data are skewed, the AI may generate skewed results.

For instance, it has been claimed that facial recognition AI is biased and that people of colour experience greater error rates than other groups. and females. The fair and just application of AI across numerous sectors, such as healthcare, finance, and criminal justice, may be severely impacted by this. In addition, if AI is not made available to everyone, there is a chance that its implementation could make already existing disparities worse. The benefits of AI might only be available to a limited number of people, further marginalising vulnerable communities. Significant socioeconomic repercussions could result from this, undermining the pursuit of sustainable development. The use of AI may also result in employment losses in some industries, which could have detrimental socioeconomic effects. While AI has the potential to increase productivity and efficiency, it also has the potential to eliminate some occupations. This might result in societal unrest and unemployment. if the problem is not addressed, there may be trouble.

Figure 2: Documented evidence of the potential of AI acting as (**a**) an enabler or (**b**) an inhibitor on each of the SDGs.
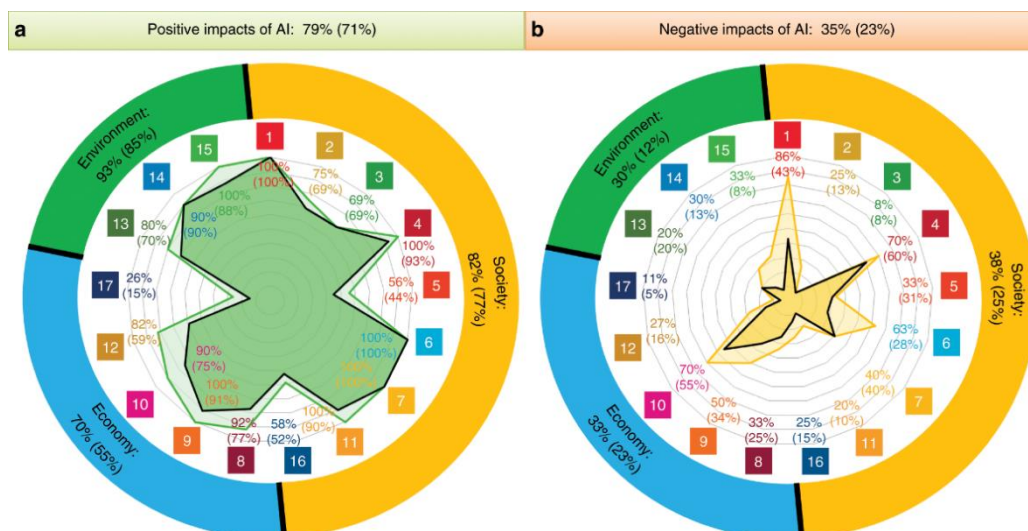
Ethical and Social Implications of AI Adoption:

Despite the possible advantages of adopting AI, there are also moral and social issues with the technology, such as job displacement, bias, and privacy. The data that AI algorithms are educated on determines how objective they are. Algorithms will be biased if the data used to teach them is biased, which will maintain current inequalities. Additionally, as machines automate duties that were previously done by humans, the adoption of AI may result in job displacement. Government officials must create laws that support people in changing careers and guarantee that the advantages of adopting AI are distributed more fairly. Although AI has a lot of potential advantages, lawmakers and society as a whole must also consider its potential drawbacks. The problem of prejudice is one of the main worries.

AI programmes gain knowledge from data they were trained on, and if the data reflects societal inequalities or includes biases, the algorithms will reinforce those biases. For instance, it has been observed that facial recognition software performs worse on individuals with darker skin tones because the algorithms are frequently taught on datasets that are predominately composed of lighter-skinned individuals. The possibility of job displacement is a serious worry. Certain jobs may become obsolete as machines become more and more capable of carrying out duties that were previously performed by humans.

The adoption of AI will have an effect on the workforce, so policymakers must take this into account and create policies that support job and retraining transitions. This could entail funding educational and training initiatives, providing financial assistance to those who lose their employment to automation, and developing new jobs. jobs in cutting-edge fields linked to sustainability and AI. Adoption of AI raises significant privacy concerns as well. Large amounts of data, some of which may hold sensitive personal information, are needed for the widespread use of AI. There is a chance that this information will be used improperly, resulting in privacy breaches and perhaps even personal injury. Regulations that ensure that data is gathered and used responsibly and ethically and that people have control over their personal information must be created by policymakers.

Literature Review

1. **Faghihi. Ahmadreza** (2017) Artificial Intelligence for Sustainable Development: A Review of the Literature and Future Directions "provides a comprehensive review of the literature on the use of AI for achieving sustainable development goals. The authors suggest that AI can be used to address various SDGs, including poverty reduction, healthcare, and environmental sustainability. For instance, AI-powered precision agriculture can help reduce food waste, enhance crop yields and save resources."

2. **Özcan Elif** (2019) Artificial Intelligence and Sustainable Development: A Systematic Literature Review" by highlights that AI can be used to enhance decision-making processes in various sectors such as healthcare, climate, and finance. For instance, AI can be used in healthcare to provide early detection and diagnosis of diseases, improving treatment outcomes, and reducing costs.

3. **Akinwale Akinmade** (2020) The Role of Artificial Intelligence in Achieving the Sustainable Development Goals emphasizes that AI can help in reducing poverty by providing access to education, financial services, and support for small and medium-sized enterprises. AI-based chatbots can assist in providing virtual learning and mentorship opportunities, enabling more people to access education.

4. **Nieves Delgado Abigail** (2021) Artificial Intelligence for Sustainable Development: A Comprehensive Review suggests that AI can be used to promote environmental sustainability by identifying patterns and trends in data related to climate change, water management and energy. AI can help optimize energy usage and reduce carbon emissions, such as AI-powered building management systems that can automatically adjust temperature and lighting according to occupancy patterns.

5. **Tambe Milind** (2021) Artificial Intelligence for Social Good: Opportunities and Challenges highlights the potential of AI in achieving the SDGs, especially in areas such as education, healthcare, and poverty reduction. For instance, AI-based educational tools can help personalize learning, improve learning outcomes, and reduce the education gap between developed and developing countries.

6. **Appiah Kofi** (2022) Artificial Intelligence for Development: Opportunities and Challenges discusses how AI can be used to address development challenges such as healthcare, education, and food security. For instance, AI-powered drones can be used to deliver medicines and medical supplies to remote areas where there is no access to healthcare facilities.

7. **UN Global Pulse** (2022) Artificial Intelligence and the SDGs: A Review of the Current Landscape provides an overview of how AI can help achieve the SDGs. AI can be used to track progress towards achieving the SDGs, such as tracking the effectiveness of programs aimed at reducing poverty, monitoring the spread of diseases, and tracking progress towards sustainable development goals.

8. **C. Sharma Ramesh** (2019) Artificial Intelligence and Sustainable Development: A Critical Review highlights that AI has the potential to revolutionize various sectors such as agriculture, healthcare, education, and finance. For instance, AI-powered financial tools can help increase access to credit for underserved populations, allowing them to start businesses and reduce poverty.

9. **Safaie Sahar** (2020) The Impact of Artificial Intelligence on Sustainable Development highlights the need for responsible AI applications to achieve the SDGs. The authors suggest that AI can be used to provide personalized healthcare, optimize food production and distribution and improve access to education, but ethical considerations must be taken into account.

10. **Fernando Dilshan** (2020) Artificial Intelligence for Inclusive Development: A Review of Opportunities and Challenges highlights how AI can be used to promote inclusive development. AI can help increase access to finance for underserved populations, provide virtual learning opportunities for people living in remote areas and provide personalized healthcare for people with disabilities.

11. **Kudzinava Kamila** (2021) Artificial Intelligence and the SDGs: A Scoping Review suggests that AI can be used to promote sustainable urbanization, reduce inequality, and promote sustainable production and consumption. For instance, AI can be used to optimize public transportation systems, reduce waste in production, and enhance supply chain management.

12. **Ahmed Manzoor** (2022) Artificial Intelligence and Sustainable Development Goals: A Review of the Literature suggests that AI can be used to enhance disaster management and response, reducing the impact of natural disasters, and improving disaster preparedness. For instance, AI can be used to predict the path of hurricanes and provide real-time alerts to people in the affected areas.

13. **De Hoyos Navarro Rafael** (2022) Artificial Intelligence and Sustainable Development Goals: A Review of the Literature and Future Directions highlights the potential of AI in achieving the SDGs, but also emphasizes the need for collaboration between governments, academia, and industry to ensure responsible and ethical use of AI. For instance, AI can be used to enhance access to healthcare in remote and underserved areas, but considerations must be taken to ensure that the technology is accessible and equitable.

14. **Ishita Ahuja** (2020) Artificial Intelligence for Sustainable Development: A Review of Applications, Opportunities, and Challenges highlights the potential of AI in achieving the SDGs through various applications, including precision agriculture, smart cities, and personalized healthcare. However, the authors also acknowledge the challenges of implementing AI in developing countries, such as lack of infrastructure and technical expertise.

15. **Yashraj Narang** (2022) Artificial Intelligence for Sustainable Development: A Review of Key Applications and Policy Considerations suggests that AI can be used to address various SDGs, including poverty reduction, healthcare, and environmental sustainability, through applications such as AI-powered chatbots, smart cities, and environmental monitoring. However, the authors also highlight the need for policy frameworks to ensure the ethical and responsible use of AI in achieving the SDGs.

Recommendations:

Collaboration between stakeholders is crucial to ensuring that AI is developed and implemented in an ethical and inclusive way. Governments, the business sector, civil society, and academic institutions should collaborate to create laws and policies that encourage the ethical application of AI for sustainable development. This can guarantee that AI is applied to all parties' advantage and does not exacerbate already-existing inequalities. Additionally, efforts should be made to make AI available to all people, regardless of their socioeconomic position. To give underserved communities access to AI-based solutions, public-private partnerships can be created. Additionally, training programmes can be created to provide individuals with the knowledge and abilities required to work with AI, and financial incentives can be offered to promote the usage of AI-based solutions.

Governments and the private sector should collaborate to create regulatory frameworks that guarantee data protection and cybersecurity to address privacy and security issues related to the use of AI. To prevent the compromise of sensitive data, data privacy rules should be strengthened, and cybersecurity means should be put in place to defend against malicious attacks. Finally, in order to reduce the danger of employment displacement brought on by the implementation of AI, governments and the private sector should invest in training programmes. To prepare for the new employment market, workers in industries that are likely to be impacted by AI should upskill or reskill themselves.

This can guarantee that everyone can benefit from AI's potential and lower the likelihood that social unrest will result as a result. from a loss of employment. Collaboration between stakeholders, efforts to ensure accessibility for everyone, steps to handle privacy and security concerns, and investments in training programmes are all necessary for the responsible use of AI for sustainable development. By overcoming these difficulties, AI can be used to advance sustainable development and enhance people's lives all over the globe. Several of the Sustainable Development Goals of the United Nations are aligned with the suggestions for overcoming the obstacles to using AI for sustainable development. (SDGs). SDG 17 supports stakeholder cooperation to guarantee the ethical and inclusive application of AI and asks for partnerships to achieve the goals.

It is in keeping with SDG 10's objectives to guarantee that everyone has access to AI, regardless of their socioeconomic status. minimise disparities. Aiming to advance peace, justice, and robust institutions, SDG 16 is consistent with actions taken to address privacy and security concerns linked to AI. Last but not least, SDG 8—which seeks to support decent work and economic growth—aligns with investments in training programmes to reduce the risk of job displacement. It is evident that the responsible application of AI for sustainable development can aid in the accomplishment of the UN's global development agenda when these suggestions are aligned with the SDGs.

Conclusion:

AI has the ability to revolutionise a number of industries and advance sustainable development objectives. AI can support sustainable agricultural methods, optimise energy use, and enhance patient outcomes. Adoption of AI, however, also brings up moral and societal issues that demand attention. To guarantee fair and sustainable outcomes, policymakers must create an AI governance system that is responsible and inclusive. Policymakers can contribute to ensuring that AI is used in a responsible and ethical way and that its benefits are shared more equitably by taking a balanced approach that considers both the advantages and challenges of AI adoption. The potential for using AI to assist SDG achievement is enormous. To make sure that it is used, it is crucial to handle the difficulties and dangers related to its deployment sincerely and universally. Stakeholder cooperation is essential for ensuring that AI is created and applied in a way that helps all parties.

All people should have access to AI-based solutions, independent of their socioeconomic situation. Additionally, efforts should be made to prevent the use of AI from worsening current disparities or causing employment displacement in specific industries. This can be done by funding educational programmes that give people the knowledge and abilities they need to work with AI and by looking into different avenues for earning a living. Concerns over privacy and security as well as problems relating to bias in data analysis and the use of AI must also be addressed.

Collaboration between the public and commercial sectors is essential to create legal structures that guarantee cybersecurity and data protection. In conclusion, combining AI and sustainable development has the ability to transform how businesses run and help the SDGs be achieved. To ensure that it is used in an ethical and inclusive manner, it is crucial to address the difficulties and risks related to its implementation. The potential of AI for sustainable development must be realised through stakeholder collaboration, access to AI-based solutions, investment in training programs, and regulatory frameworks to guarantee data safety and cybersecurity.

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