

How Artificial Intelligence Can Improve our Daily Life

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INTRODUCTION

Artificial Intelligence (AI) is the field of computer science that focuses on creating machines and systems capable of performing tasks that normally require human intelligence. These tasks include learning from experience, recognizing speech and images, understanding natural language, and making decisions. Once considered a futuristic concept, AI has now become a central part of our daily lives. From virtual assistants like Siri and Alexa to personalized recommendations on platforms such as Netflix and Amazon, AI is already embedded in the technologies we use every day.

AI's expanding impact is changing almost all aspects of current society. It is utilized in a variety of sectors, including education, transportation, healthcare, and finance. AI-powered solutions are improving accuracy and efficiency in the workplace. Smart technologies are improving connectivity and convenience in homes. Governments are using AI to enhance decision-making and service delivery even in the public sector. AI's capacity to solve difficult problems and enhance people's quality of life is growing in importance as it develops.

Understanding the impact of AI on our daily lives is important not only for appreciating the benefits it brings but also for preparing for the changes it may introduce. While there are valid concerns about privacy, job displacement, and ethical use, the positive contributions of AI cannot be overlooked. When used responsibly, AI has the power to enhance human capabilities and create smarter, more responsive environments.

BACKGROUND

2.1 Evolution of AI:

The concept of Artificial Intelligence dates back to the mid-20th century, when researchers first began exploring the idea of machines that could mimic human reasoning. In 1956, the term "Artificial Intelligence" was coined at the Dartmouth Conference, marking the official birth of the field. Early AI systems relied on symbolic reasoning and rule-based approaches but struggled with complex, real-world problems.

In the 1980s and 1990s, the development of expert systems showed some promise, but progress was limited by computing power and the need for extensive manual knowledge engineering. The true breakthrough came in the 21st century with the rise of machine learning particularly deep learning driven by larger datasets, improved algorithms, and faster processors. Today, AI is advancing rapidly, with systems capable of performing tasks such as language translation, image recognition, and autonomous driving with remarkable accuracy.

Key AI Technologies

Modern AI relies on several key technologies:

1. **Machine Learning (ML):** A subset of AI that enables systems to learn from data and improve over time without explicit programming. ML algorithms power recommendation systems, fraud detection, and predictive analytics.
2. **Natural Language Processing (NLP):** This technology allows machines to understand, interpret, and generate human language. Applications include virtual assistants, chatbots, and language translation services.

3. **Computer Vision:** The ability of AI systems to interpret and understand visual information from the world, used in facial recognition, medical imaging analysis, self-driving cars, and quality control in manufacturing.

These technologies form the backbone of many AI applications that are already integrated into daily life.

2.2 Prior Research on AI's Impact on Daily Life

The revolutionary effects of AI on society have been the subject of much research. According to research, AI-powered automation boosts productivity in sectors including customer service, shipping, and manufacturing (Brynjolfsson & McAfee, 2014). Additionally, research shows that AI-powered customization enhances the online purchasing and entertainment experience for users (Smith, 2019).

In healthcare, AI has demonstrated the ability to enhance diagnostic accuracy, support clinical decision-making, and improve patient outcomes (Topol, 2019). Other research points to AI's role in smart homes and cities, enabling energy efficiency, improved security, and better resource management (Batty et al., 2012). While there are ongoing debates about ethical concerns, job displacement, and privacy, the consensus in the literature is that AI has the potential to significantly improve quality of life when implemented thoughtfully and responsibly.

SOME AI APPLICATIONS IN DAILY LIFE

Artificial intelligence is becoming more than just a science fiction idea, we use it on a daily basis, frequently without even recognizing it. AI affects how we live, work and communicate from the minute we wake up until we go to bed.

3.1 Automation & Convenience :

Artificial Intelligence plays a key role in making daily tasks more convenient through automation. Smart assistants like Siri, Alexa, and Google Assistant can perform tasks such as setting reminders, playing music, answering questions, or controlling smart home devices—all through voice commands.

AI is also integrated into household appliances. For example, smart thermostats learn user preferences and adjust temperatures automatically to save energy, while robotic vacuums like Roomba can clean homes independently by mapping the environment and avoiding obstacles. These applications help people save time and effort in managing everyday chores.

3.2 Personalization:

By customizing services to each customer's preferences, AI improves the user experience. On websites like Netflix, Spotify, and Amazon, recommendation systems examine users' viewing, listening, and purchasing patterns to recommend goods or content they're likely to like.

AI is used in social media to help develop personalized feeds that display material that people are most likely to interact with. Additionally, it facilitates targeted advertising, which enables companies to connect with particular audiences according to their demographics, interests, and online behavior.

3.3 Healthcare:

Artificial intelligence is transforming healthcare by enhancing diagnostics, treatment, and patient management. AI-powered systems like IBM Watson and Google DeepMind analyze medical images—such as X-rays, MRIs, and CT scans—with remarkable accuracy, often detecting conditions like tumors or fractures faster than human specialists. Beyond diagnostics, AI enables personalized medicine by predicting how patients will respond to treatments based on their genetic profiles and medical history. Wearable devices, such as smartwatches, use AI to monitor vital signs in real time, alerting users and doctors to potential health risks like irregular heartbeats or blood sugar fluctuations. Additionally, AI accelerates drug discovery by simulating how molecules interact, significantly cutting down the time and cost of developing new medications.

3.4 Transportation and Safety:

AI is revolutionizing transportation by making travel safer and more efficient. Self-driving cars, like those developed by Tesla and Waymo, rely on AI to navigate roads, interpret traffic signals, and avoid collisions, reducing accidents caused by human error. In urban areas, AI optimizes traffic flow by adjusting signal timings based on real-time congestion data, easing gridlock in cities like Singapore and Los Angeles. Airlines and logistics companies use AI for predictive maintenance, identifying potential mechanical issues in vehicles and aircraft before they lead to failures. These advancements not only improve safety but also lower operational costs and environmental impacts.

ETHICAL CHALLENGES

While AI offers significant benefits, it also poses several ethical risks that must be addressed. One major concern is **bias**, where AI systems may unintentionally reinforce discrimination in areas such as hiring or policing. If trained on biased data, AI can perpetuate unfair practices, leading to unequal treatment of individuals based on race, gender, or other factors. Ensuring fairness and transparency in AI decision-making is crucial to prevent such issues.

Another critical issue is **privacy**, as AI systems often rely on vast amounts of data, raising security and ethical concerns. The collection and use of personal information without proper consent can lead to misuse or breaches, putting individuals at risk. Strong data protection measures and clear regulations are needed to safeguard privacy while allowing AI to function effectively.

Additionally, **job displacement** due to automation is a growing challenge. As AI and robotics take over repetitive or routine tasks, many workers may find their roles obsolete. This shift could lead to economic instability if not managed properly. To mitigate this, governments and businesses must invest in **reskilling and upskilling programs**, helping workers transition into new roles that require human creativity, problem-solving, and emotional intelligence—areas where AI still falls short. Addressing these ethical challenges is essential to ensure AI benefits society as a whole.

CONCLUSION

Artificial Intelligence has undeniably transformed modern life, offering unprecedented convenience, efficiency, and innovation across various sectors. From personalized recommendations and smart home automation to breakthroughs in healthcare and transportation, AI has enhanced the way we live, work, and interact with technology. Its ability to analyze vast amounts of data, learn from patterns, and make intelligent decisions continues to drive progress in ways previously unimaginable.

However, as AI becomes more deeply integrated into society, addressing its ethical challenges is crucial. Issues such as bias, privacy, and job displacement require proactive solutions—including transparent algorithms, robust data protection laws, and workforce reskilling initiatives. The future of AI should not only focus on technological advancement but also on ensuring fairness, accountability, and inclusivity.

Ultimately, the responsible development and deployment of AI will determine its long-term impact. By balancing innovation with ethical considerations, society can harness AI's full potential while minimizing risks, paving the way for a future where technology works in harmony with human values and needs.

REFERENCES

1. Russell, S., & Norvig, P. (2020). Artificial Intelligence: A Modern Approach (4th ed.). Pearson.
2. Comprehensive overview of AI principles and applications.
3. Goodfellow, I., Bengio, Y., & Courville, A. (2016). Deep Learning. MIT Press.
4. Authoritative text on deep learning, a major AI technique.
5. 3.Brynjolfsson, E., & McAfee, A. (2014). The Second Machine Age: Work, Progress, and Prosperity in a Time of Brilliant Technologies. W.W. Norton & Company.

6. Discusses AI's impact on productivity and society.
7. Topol, E. J. (2019). *Deep Medicine: How Artificial Intelligence Can Make Healthcare Human Again*. *Basic Books*.
8. Explores AI's transformative effects in healthcare.
9. Kaplan, J., & Haenlein, M. (2019). Siri, Siri, in my hand: Who's the fairest in the land? On the interpretations, illustrations, and implications of artificial intelligence. *Business Horizons*, 62(1), 15-25.
10. Covers AI applications in virtual assistants and business contexts.
11. Bostrom, N. (2014). *Superintelligence: Paths, Dangers, Strategies*. Oxford University Press.
12. Examines risks and ethical challenges of AI.
13. Rahwan, I., Cebrian, M., Obradovich, N., Bongard, J., Bonnefon, J.F., Breazeal, C., ... & Wellman, M. (2019). Machine behaviour. *Nature*, 568(7753), 477-486.
14. Research on AI behavior and societal impact.