THE ROLE AND IMPORTANCE OF ARTIFICIAL INTELLIGENCE IN EVERYDAY LIFE

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Abstract: *Artificial intelligence (AI) has previously existed only in theoretical models, but now it has become an integral part of our daily lives. This article analyzes the use of AI in personal and professional environments, its role in smart devices, healthcare, transportation, education, and financial services with examples. It also examines data privacy, ethical issues, and future development trends. The article assesses the impact of AI on global society and calls for responsible development.*

Keywords: *Artificial intelligence, machine learning, smart devices, healthcare innovations, AI ethics, future trends.*

Artificial intelligence is a branch of computer science that is generally concerned with creating computer systems that have capabilities similar to those of the human mind: understanding language, teaching, reasoning, problem solving, translation, and so on. Artificial intelligence (AI) began to develop in the 1950s after the work of scientists such as Alan Turing. While it initially existed only in the field of academic research, today AI is the basis for technological solutions that we encounter every day. AI performs tasks associated with the human mind - learning, reasoning, problem solving, and even communication. Today, we see AI in many areas, from healthcare to education, transportation, and finance. Currently, AI consists of algorithms and software systems designed to perform various tasks, and it can perform many of the tasks that the human mind can perform.

Artificial Intelligence in Everyday Life

Smart Devices and Virtual Assistants Virtual assistants such as Amazon Alexa, Apple Siri, Google Assistant, and ChatGPT use natural language processing (NLP) technology to understand and respond to human speech. They manage tasks, find information, and control smart home systems. For example, smart thermostats automatically adjust heating and cooling systems based on the weather, which improves energy efficiency.

Advances in healthcare

In medicine, AI plays a key role in diagnostics and patient care. For example, IBM's Watson Health platform is helping doctors diagnose cancer. During the COVID-19 pandemic, AI models have played a key role in predicting the spread of the disease and allocating resources. Robotic surgeons, such as the da Vinci Surgical System, are performing precise and minimally invasive surgeries, reducing patient recovery times.

Transportation and Autonomous Vehicles

Autonomous cars developed by companies like Tesla, Waymo, and others use deep learning techniques to perceive their surroundings, navigate safely, and make decisions in real time. Smart cities are also using AI to manage traffic flow, reducing congestion and pollution.

Education and Personalized Learning

In education, AI is advancing personalized learning. Platforms like Duolingo, Coursera, and Khan Academy provide recommendations tailored to students' learning styles. Artificial intelligence is used to identify gaps in knowledge and create personalized learning programs for students. Virtual tutors are providing real-time feedback to students.

Financial Services and Fraud Detection

SI is widely used in banking and finance for credit risk assessment, investment portfolio management, and fraud detection. Machine learning algorithms analyze transactions and detect suspicious activity early. Customer service is also being automated through chatbots using SI.

Issues and ethical debates

The expansion of AI technologies raises concerns about data privacy, algorithmic injustice, and job losses. For example, AI algorithms in some large companies' hiring systems have been found to be biased by gender and race. The collection and storage of data poses a threat to privacy. Strict adherence to ethical standards and regulations is necessary to ensure that AI technologies do not exacerbate social inequalities.

The Future of Artificial Intelligence

Researchers hope that AI will be able to perform almost all human tasks independently by 2060. For example, scientists at the University of Oxford, in collaboration with Google's DeepMind AI division, have trained a system to read lips better than humans. The Watch, Attend and Spell program can distinguish between words with similar lip movements and analyze up to 50% of silent speech.

In the future, explainable AI (Explainable AI) technologies will develop, allowing users to explain how algorithms make decisions. In addition, models

based on emotional intelligence will be able to identify human emotions and create more natural communication. It is expected that special assistive devices based on AI will be developed for people with disabilities. AI can also help solve environmental problems, reduce poverty, and create wider access to health services.

In conclusion, Artificial Intelligence has penetrated almost all areas of modern society and has become one of the main factors of the technological revolution. Although its potential is enormous, ethical, legal and social issues are also emerging. Therefore, in the development of AI technologies, it is necessary to adhere to human values, the principles of justice and transparency. Only then will AI become a truly beneficial force for society.

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