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NATURAL LANGUAGE PROCESSING USING ARTIFICIAL INTELLIGENCE

Е. Д. МАКАРОНОК, В. О. ДЕМИДЕНКО
Научный руководитель Т. П. ПИНЧУКОВА
Белорусско-Российский университет
Могилев, Беларусь

The report is dedicated to the influence of Artificial Intelligence on various spheres of our life, with a focus on Natural Language Processing. Artificial Intelligence is defined as the ability of machines to perform tasks that typically require human intelligence, such as learning, problem-solving, decision-making, and understanding natural language.

Artificial Intelligence is used in many areas of our lives, including automobiles (autopilots and driver assistance systems), smartphones (voice assistants and facial recognition systems), healthcare (disease diagnosis and personalized treatment), business (data analysis and process automation), and art (generation of music and images).

The main focus is on Natural Language Processing using Artificial Intelligence, which allows computers to understand, interpret, and generate human language. The main challenges in this field include machine translation, speech recognition, natural language generation, information extraction, and translation of foreign videos into Russian.

One of the recent advancements in this field is the machine video translation technology of Yandex. Based on neural networks, this technology translates and dubs videos from six languages: English, Spanish, French, Italian, German, and Chinese. The translation process involves several stages, including speech recognition, text translation, and voicing and combining the translated text with the video sequence.

The report discusses examples of using Artificial Intelligence in Natural Language Processing, including Yandex's machine video translation technology and voice assistants such as Alice, Apple Siri, Google Assistant, and others. These software applications can process voice commands and interact with the user in natural language, providing a convenient way to control devices and get information without typing or using keys. They offer various features, such as hands-free internet searches, task organization, smart home device control, messaging and calling, route building, and more.

In conclusion, AI-powered Natural Language Processing is revolutionizing the way humans interact with machines. It enables more natural and intuitive communication and opens up new opportunities for innovation. Depending on the user's preferences, they can choose a voice assistant that better suits their needs and the services they use. This report underscores the transformative potential of Artificial Intelligence and Natural Language Processing in shaping our future interactions with technology.