ARTIFICIAL INTELLIGENCE IN MODERN PROJECTS

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ИСКУССТВЕННЫЙ ИНТЕЛЛЕКТ В СОВРЕМЕННЫХ ПРОЕКТАХ

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ABSTRACT

Presented is the article illustrating data regarding the definitions of artificial intelligence and the period of development of artificial intelligence. As an example, projects in the field of artificial intelligence are given. With the help of the Teachable Machine service, methods for teaching machines, for example creating software products capable of performing tasks that normally require human intelligence, such as vision, speech understanding, and decision making, are highlighted.

АННОТАЦИЯ

В данной статье представлена информация об определениях искусственного интеллекта и сроках его развития. В качестве примеров приведены проекты в области искусственного интеллекта. Служба Teachable Machine используется для акцентирования внимания на методах обучения машин, таких как разработка программных продуктов, способных выполнять действия, часто требующие человеческого интеллекта, такие как интерпретация речи, зрение и принятие решений

Keywords: visual intelligence, expert, semiotics, biology, neural networks, methodology, project, social, corporate, process, model, system, object, chatbot, private, forecast, information.

Ключевые слова: визуальный интеллект, эксперт, семиотика, биология, нейронные сети, методология, проект, социальный, корпоративный, процесс, модель, система, объект, чат-бот, приват, прогноз, информация.

Artificial intelligence (AI) is changing the way we live, work and interact. AI is changing our methodology, from how we live our private lives to our social responsibilities and how we manage our private and corporate businesses. From legacy medical expert systems and intelligent search engines to intelligent chatbots and predictive models, the shift towards AI methods is advancing rapidly.

Intelligence - the ability to think, the level of mental development; intelligence Artificial intelligence - computers (programs) that imitate people

- Finding solutions to problems
- When making a rational decision
- act like people

DEFINITION OF ARTIFICIAL INTELLIGENCE: The study and creation of computer systems capable of performing tasks that would normally require human intelligence, such as visual perception (vision), speech recognition, decision making, and translation.

The following picture shows the growth retro of artificial intelligence:

Библиографическое описание: Fayziyeva D., Turayeva G. ARTIFICIAL INTELLIGENCE IN MODERN PROJECTS // Universum: технические науки: электрон. научн. журн. 2023. 4(109). URL: *https://7universum.com/ru/tech/archive/item/15281*

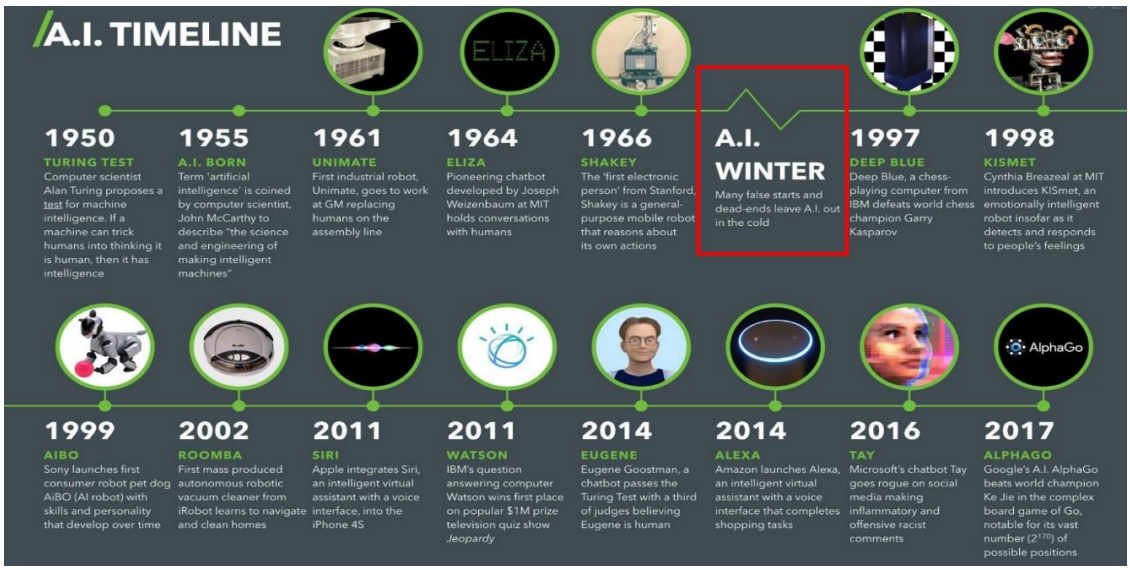

Figure 1. The growth retro of artificial intelligence

Artificial intelligence technologies are developing in two directions:

1. Down (semiotic). It presents the development of new systems and knowledge bases that represent higher order mental processes such as speech, thinking and emotions.

2. Up (biological). This approach involves research in the field of neural networks that create intelligent behavior models from the point of view of biological processes. Neurocomputers form the basis of this direction [1, p. 113].

Very large projects in the field of artificial intelligence are currently being implemented, for example: Google has developed a tool based on artificial intelligence (AI) algorithms that can describe the smell of an object based on its chemical composition. [3, p. 88]. To do this, the Google team trained a neural network using datasets of flavors and aromas from more than 5,000 different molecules. Therefore, a scent record was created. The AI was also able to accurately determine the strength of a smell and its similarity to other smells, as well as how it is perceived by other animals.

Another example is Google's Teachable Machine online service.

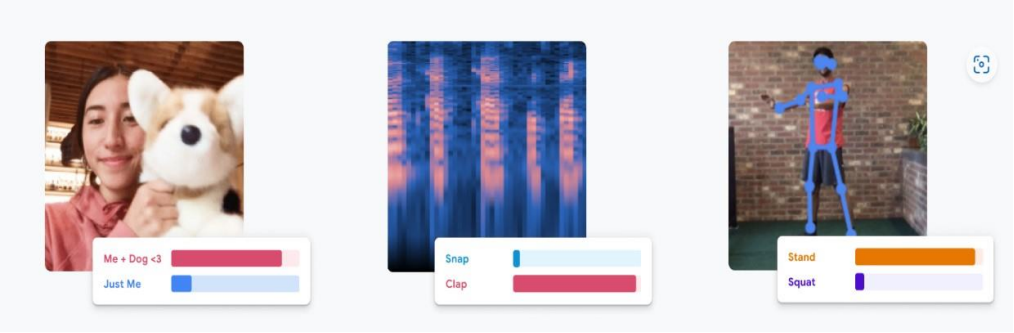

Figure 2. Google's Teachable Machine online service

The first version of Teachable Machine was released in 2017 and is a web-based tool that allows anyone to easily create machine learning models. How to use these online service tools?

Figure 3. Machine learning models

Grouping (i.e. collecting images): you need to group the examples by the classes and categories that you want to teach the computer. Model training. It is recommended that you train and test the model immediately to ensure that it correctly classifies new instances. Export: You can export your model for projects: websites, applications, etc. The model can be downloaded or posted online.

The Teachable Machine online facility lets you to train a machine with three types of information: image learning, voice learning, and case learning. The model is trained to classify images. To do this, we need ready-made files or a webcam. Aptitude to train a voice classification model using small audio recordings. Training a body pose classification model. To do this, we need ready-made images or a webcam. [8,website. *https://teachablemachine.withgoogle.com*].

Briefly, the machine learning process is as follows:

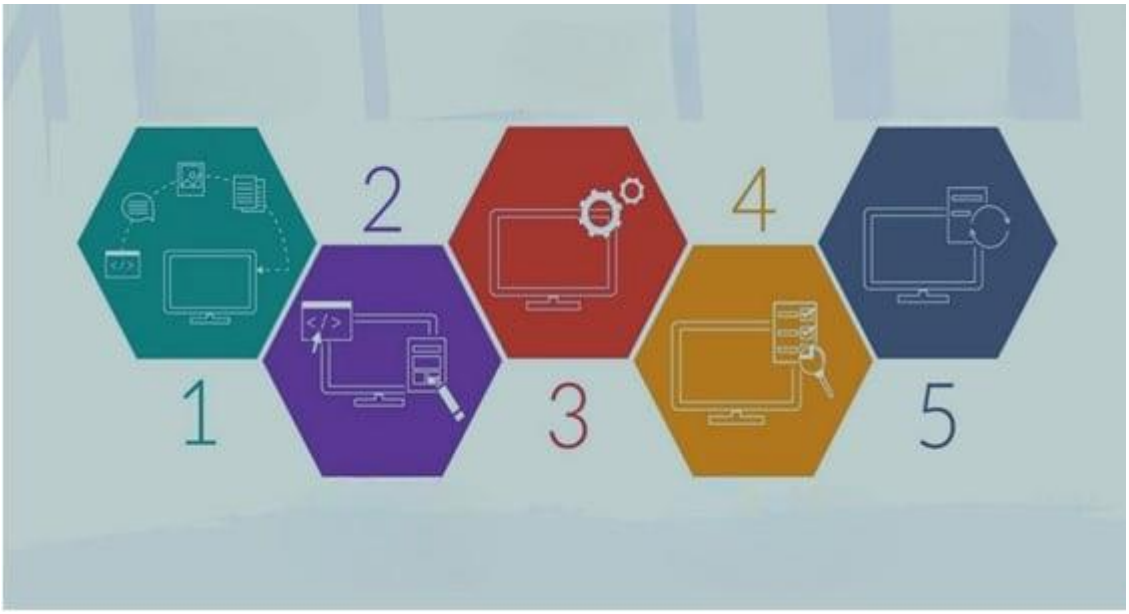

Figure 4. The machine learning process

1. Complect information
2. Cleaning information and preparing
3. Create model
4. Try model
5. Improving model

The introduction of artificial intelligence, significantly contributing to unexpected changes in the economy, will cause the disappearance of a number of specializations related to data processing - artificial intelligence requires physical labor and information, the processor is engaged, for example, in retail trade, a hotel employee and other similar professions.

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