

## Artificial intelligence

Ivan Lyulyaev, ICS6-22B

### (What is Artificial intelligence?)

**2nd slide:** In computer science, artificial intelligence (AI), sometimes called machine intelligence, is intelligence demonstrated by machines, in contrast to the natural intelligence displayed by humans. From SIRI to self-driving cars, AI is progressing rapidly. While science fiction often portrays AI as robots with human-like characteristics, AI can encompass anything from Google's search algorithms to IBM's Watson

### (History of AI)

**3rd slide:** While the roots are long and deep, the history of artificial intelligence as we think of it today spans less than a century. The term artificial intelligence was coined in 1956, but AI has become more popular today thanks to increased data volumes, advanced algorithms, and improvements in computing power and storage. Early AI research in the 1950s explored topics like problem solving and symbolic methods.

### (How does AI work?)

**4th slide:** AI works by combining large amounts of data with fast, iterative processing and intelligent algorithms, allowing the software to learn automatically from patterns or features in the data. At its core, AI is the branch of computer science that aims to answer Turing's question in the affirmative. It is aimed to replicate or simulate human intelligence in machines.

## **(How is AI used?)**

**5th slide:** Artificial intelligence generally falls under two broad categories: Narrow AI and Artificial General Intelligence. Narrow AI operates within a limited context and is a simulation of human intelligence. Artificial General Intelligence is the kind of artificial intelligence we see in the movies, like the robots from Westworld.

Narrow AI is all around us and is easily the most successful realization of artificial intelligence to date. With its focus on performing specific tasks, Narrow AI has experienced numerous breakthroughs in the last decade

What about Artificial General Intelligence. Researches have difficulties with its realisation, that are being solved right now.

## **(Challenges of using artificial intelligence)**

**6th slide:** Artificial intelligence is going to change every industry, but we have to understand its limits. The principle limitation of AI is that it learns from the data. There is no other way in which knowledge can be incorporated. That means any inaccuracies in the data will be reflected in the results. Today's AI systems are trained to do a clearly defined task. The system that plays poker cannot play solitaire or chess. The system that detects fraud cannot drive a car or give you legal advice. In fact, an AI system that detects health care fraud cannot accurately detect tax fraud.

In other words, these systems are very, very specialized. They are focused on a single task and are far from behaving like humans.

## **(Today's AI reality)**

**7th slide:** Computer power is growing, algorithms and AI models are becoming more sophisticated, and, perhaps most important of all, the world is generating unimaginable volumes of data. Data, measured in billions of gigabytes every day, is collected by networked devices in virtually every industry. As a result, AI is being tightly interwoven into almost every aspect of our lives, from our cars and medical devices to robots and entertainment. It's here to stay. The question is, how can we shape it?