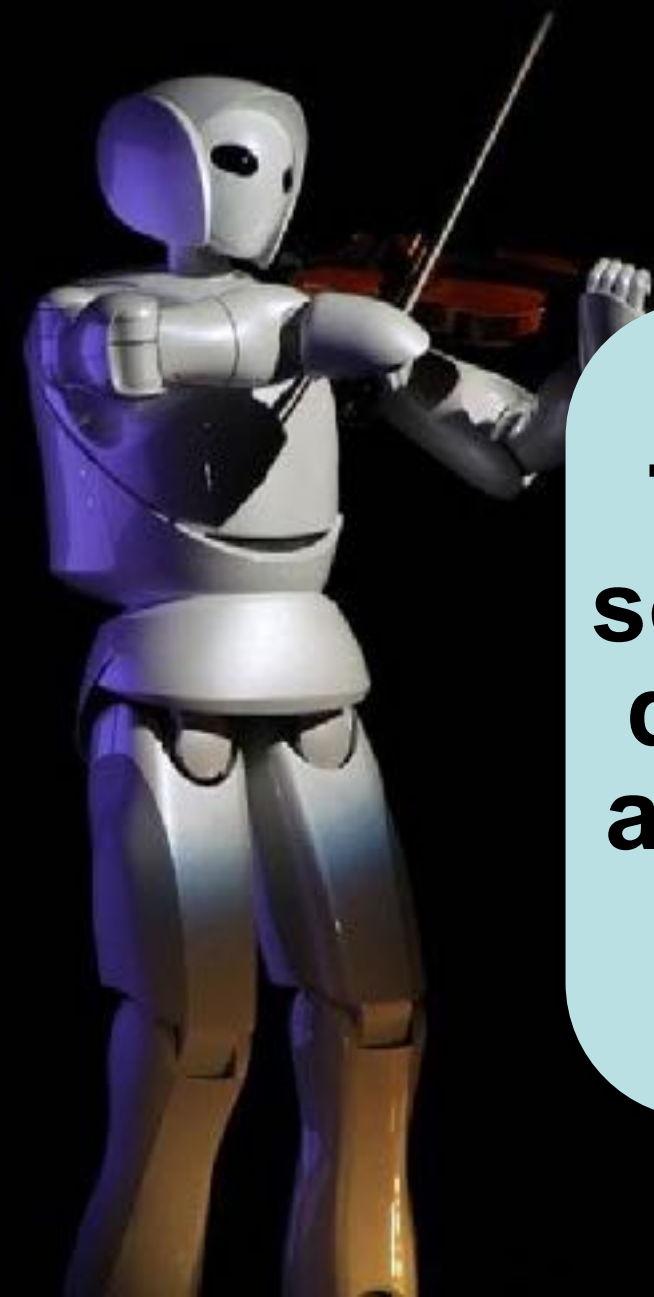


INNOVATING ARTIFICIAL INTELLIGENCE AND MACHINE LEARNING



ARTIFICIAL INTELLIGENCE

A white humanoid robot is shown from the waist up, holding a violin and bow. The robot has a sleek, modern design with a white head and torso, and yellowish-gold legs. It is positioned on the left side of the image, facing right. The background is dark with some colorful, abstract light patterns in the upper left corner.

The ability of computer software and hardware to do those things that we, as humans, recognize as intelligent behaviour.



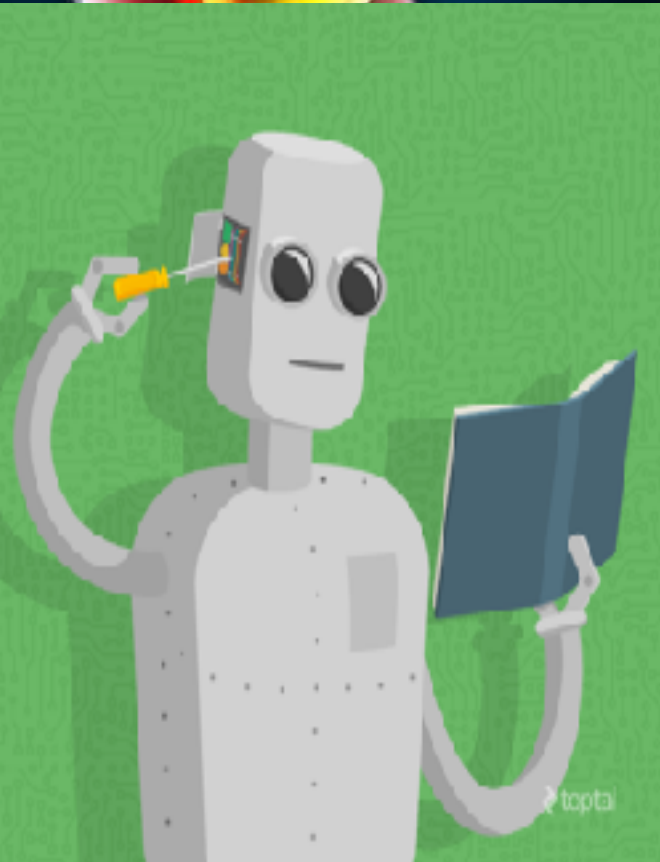
FOR EXAMPLE

Searching: finding “good” material from a large quantity of available data.

Recognizing patterns: finding items with similar characteristics

Surmounting constraints: finding ways that something will fit into a confined space, building a complex object, or moving through a maze.

MACHINE LEARNING



A machine is trained by algorithms enabling it to learn how to perform a task on the basis of large amount of data

ML Leads to AI

General AI machines have remained in the realm of science fiction novels for good reason; we haven't pulled it off, at least not yet

What we can do now falls into the category of “narrow AI”

ML Leads to AI

Image classification or Face Recognition are some good examples of “narrow AI”.

In order to achieve such kind of intelligence, machine learning acts as an approach to achieve artificial intelligence

MAJOR BRANCHES OF AI



MAJOR BRANCHES OF AI

Robotics

Visions System

Natural Language Processing (NLP)

Neural Networks



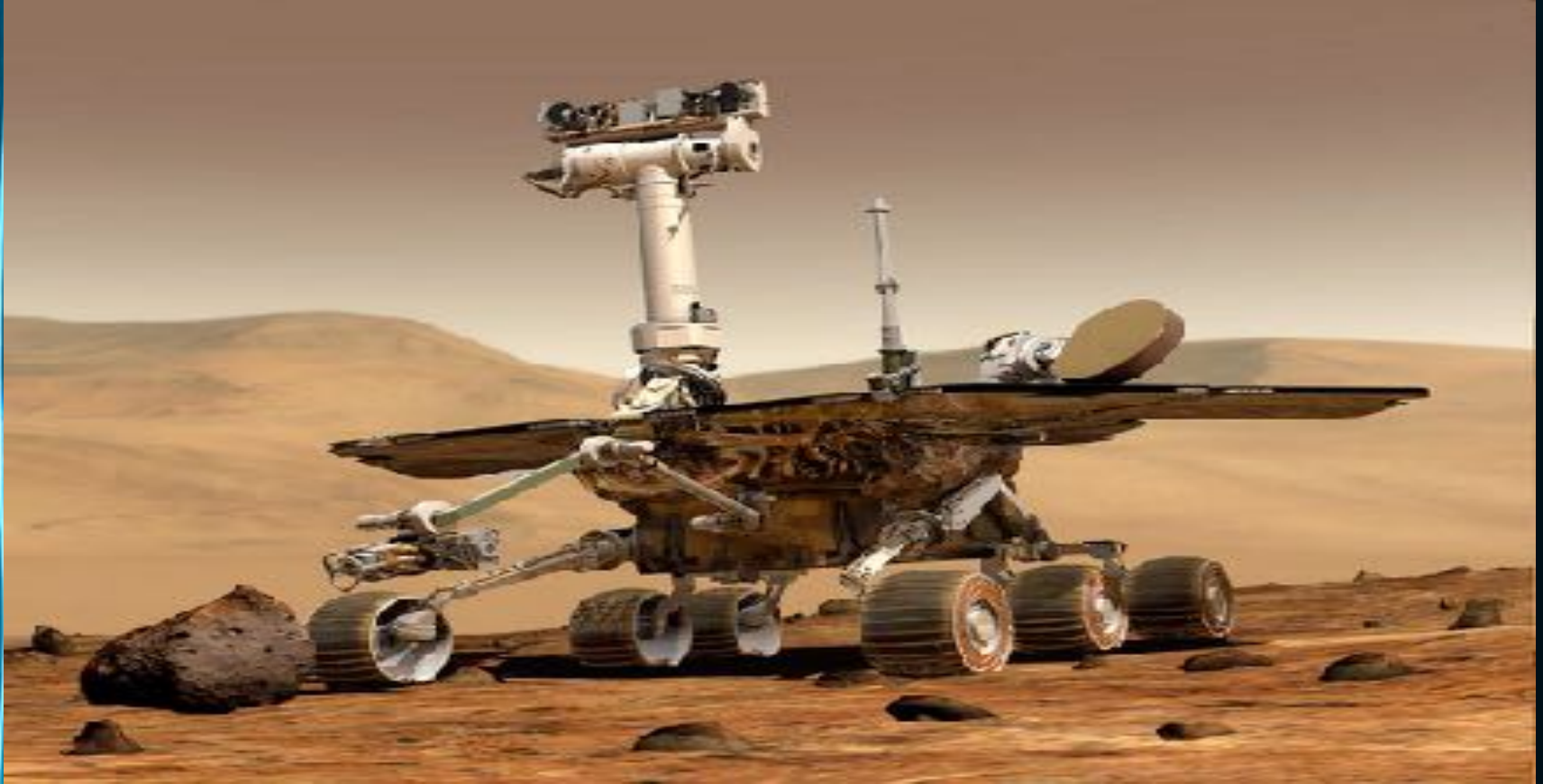
Robotics

involve developing mechanical or computer devices that perform tasks requiring a high degree of precision or that are hazardous for humans



FOR EXAMPLE:-
ASIMO



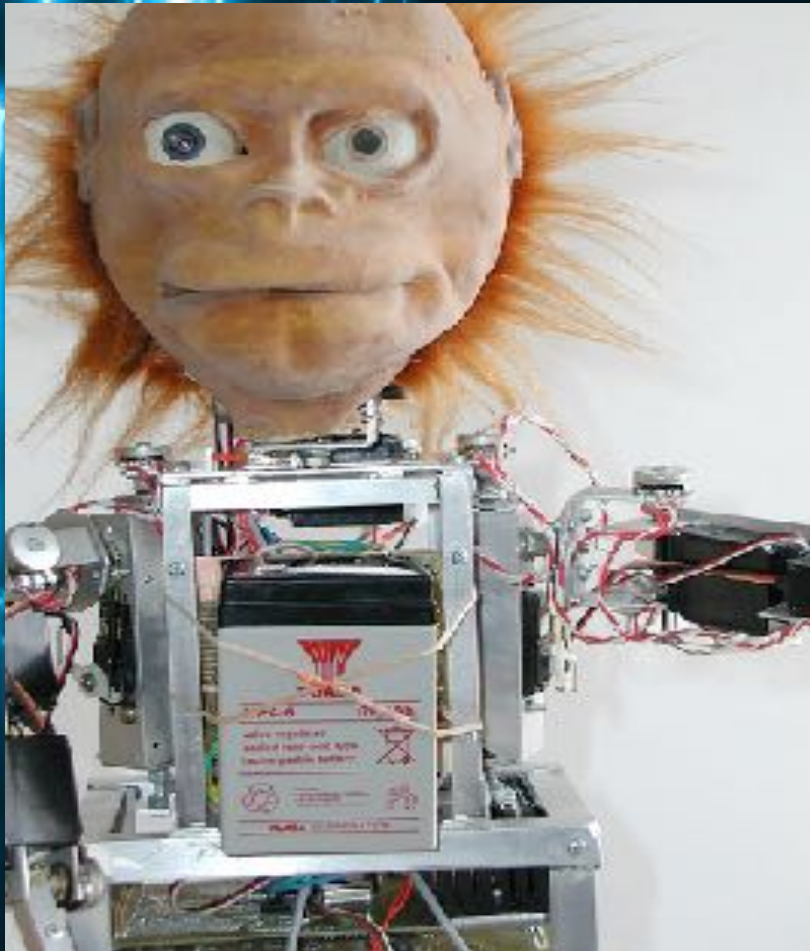


The **Rover** was a remote-controlled robot used by NASA to explore the surface of Mars

Vision Systems

Include hardware and software that permit computers to capture, store, and manipulate visual images and pictures.

FOR EXAMPLE: Lucy



- An orangutan robot, was a pure research project to develop some novel theories about the fundamental operating principles of the brain

Natural Language Processing

Computers understand and react to statements and commands made in a “natural” language, such as English

Machine translation: based on a large corpus like wiki, companies could train translation machine from one language to another

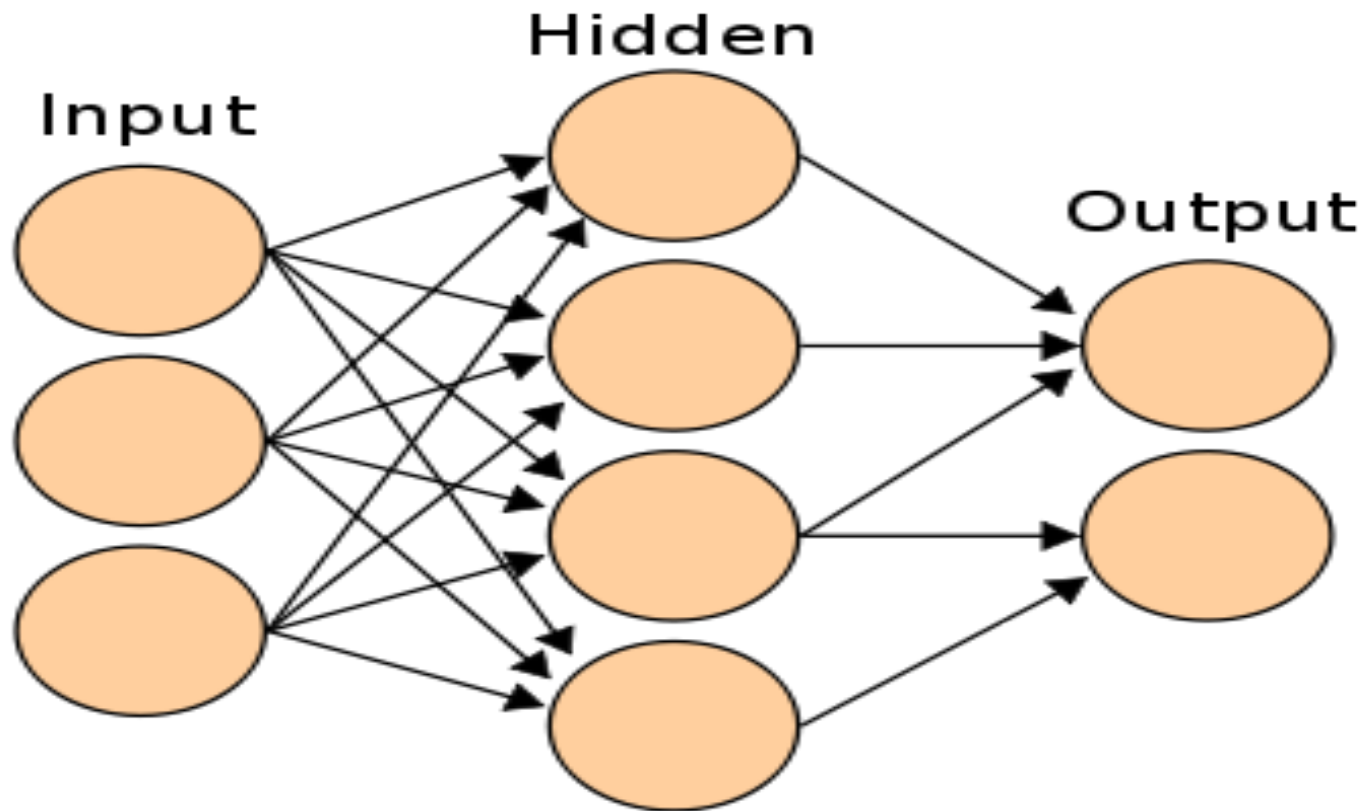
Question answering: Siri is one of the questions answering models that we are familiar with

In the healthcare sector, patients with less serious illness could consult with online “doctors” to get immediate and proper instruction by input their medication history and symptoms



Artificial Neural Networks

Computer system that can act like or simulate the functioning of the human brain



ADVANTAGES

Artificial intelligence wouldn't need any sleep and have unemotional considerations of problems

The Process of Automation of task is easily Possible. Based on user's past search, Google and Facebook are using machine learning to present relevant advertisements

Due to machine learning there are tools available to provide continuous quality improvement in large and complex process environments

Machine learning is used to handle multi-dimensional and multi-variety data in dynamic environments

DISADVANTAGES

If robots start replacing human resources in every field, we will have to deal with serious issues like unemployment

Intelligent machines may not be the right choice for customer service.

Intelligent machines overpower human beings

Limited sensory input, an artificial mind is only capable of taking in a small amount of information

CHALLENGES

Acquisition of relevant data is the major challenge. Based on different algorithms data need to be processed before providing as input to respective algorithms. This has significant impact on results to be achieved or obtained

Interpretation of results is also a major challenge to determine effectiveness of machine learning algorithms

Based on which action to be taken and when to be taken, various machine learning techniques are need to be tried

Who's to blame when a software or hardware malfunctions? Before AI, it was relatively easy to determine whether an incident was the result of the actions of a user, developer or manufacturer

CONCLUSION

**“Don't be afraid of
Technology” by Prof
Kris Singh**

Please watch the video clip

A short Vido Clip about AI



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ANY QUERY?