

The background is a deep blue gradient. On the left, there is a stylized profile of a human head in a lighter blue shade. Inside the head, a network of glowing green lines and nodes is visible, resembling a neural network or circuitry. To the right of the head, there are several large, semi-transparent circles in shades of teal and blue. A network of thin, light blue lines connects various points across the background, creating a web-like pattern. The text 'Artificial Intelligence' is centered in the middle of the image, in a bold, white, sans-serif font. It is flanked by two horizontal bars: a teal one above and a blue one below.

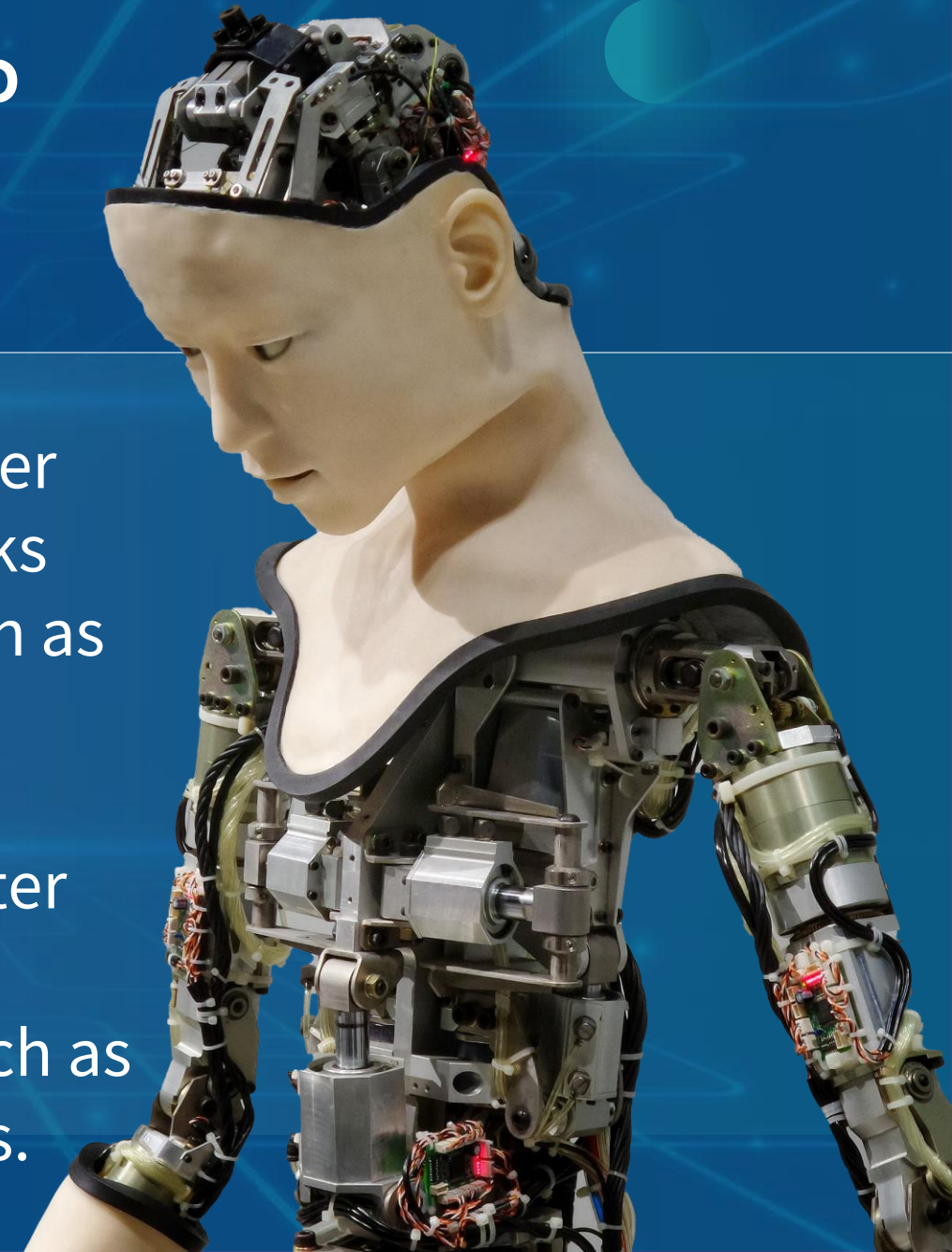
# Artificial Intelligence

# What Is Artificial Intelligence?



→ Artificial intelligence (AI) refers to computer systems capable of performing complex tasks that historically only a human could do, such as reasoning, making decisions, or solving problems.

→ is the theory and development of computer systems capable of performing tasks that historically required human intelligence, such as recognizing speech, and identifying patterns.

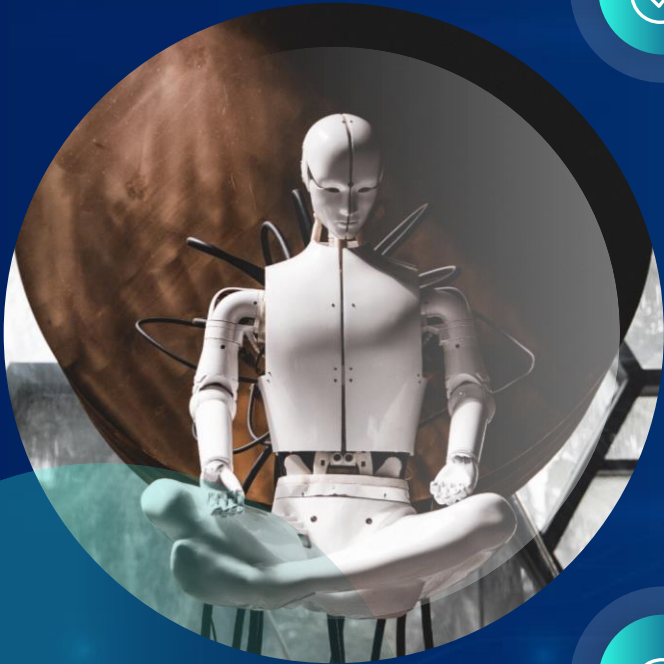


## Artificial intelligence examples :

- ChatGPT: Uses large language models (LLMs) to generate text in response to questions or comments posed to it.
- **Google Translate**: Uses deep learning algorithms to translate text from one language to another.
- **Netflix**: Uses machine learning algorithms to create personalized recommendation engines for users based on their previous viewing history.
- **Tesla**: Uses computer vision to power self-driving features on their cars.



# Artificial intelligence benefits



Artificial Intelligence Helps Solve Complex Problems.

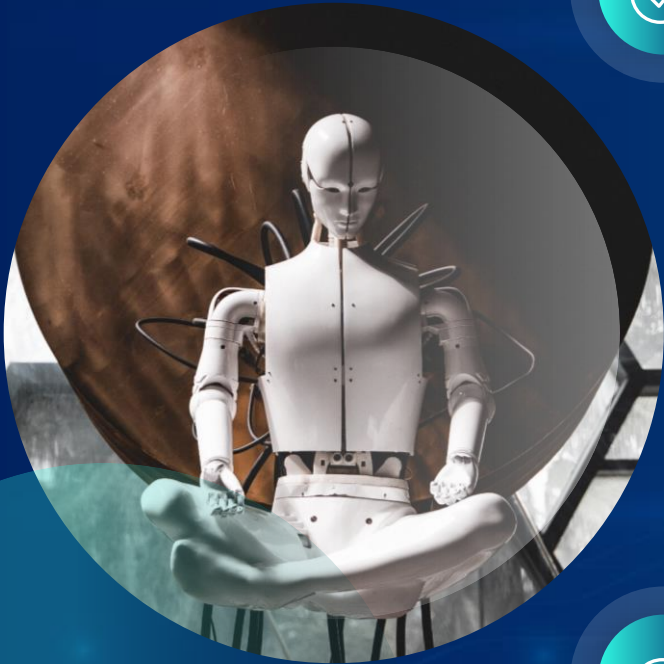


AI Can Help Improve Education Worldwide



Artificial Intelligence Brings About Automation

# Artificial intelligence benefits



AI Can Help Humans Make Smarter and Faster Decisions

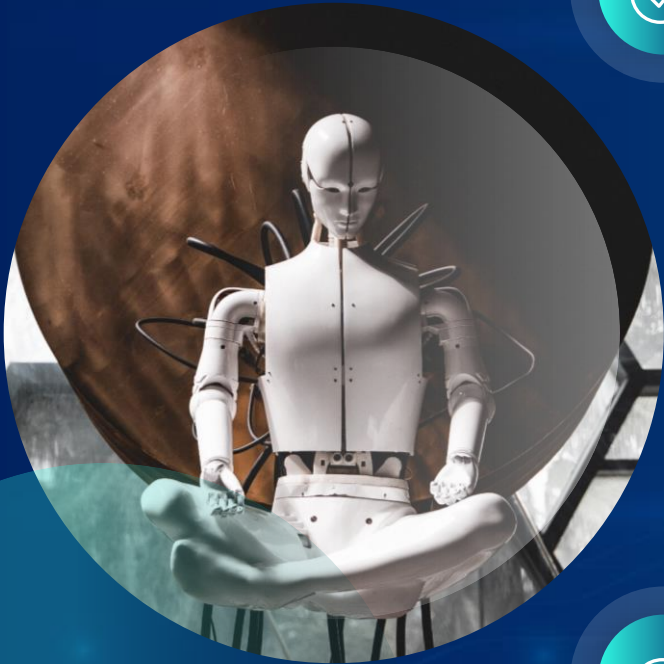


Artificial Intelligence Can Minimize Errors



AI Helps With Research and Data Analysis

# Artificial intelligence benefits



AI Can Help Advance the Field of Medicine



Artificial Intelligence Can Save Lives



Make interactive game more fun by making the computer controlled characters more realistic and human like



# Applications of AI



- Expert Systems.
- Gaming.
- Natural Language Processing (NLP).
- Machine learning (ML).
- Neural Network.
- Computer Vision.
- Genetic Algorithm.
- Robotics.



# programming languages used to develop ai:

- Python.
- Prolog.
- C++.
- LISP.
- Java.



# Programming languages are of two kinds:

## Procedural Programming

All traditional programming languages contain a series of instructions that are to be performed ('executed') one after another. This style of programming is called **procedural**.

Examples: C , C++, Java

## Declarative Programming

Requires a more descriptive style.  
The programmer must know what relationships hold between various entities.

Examples: LISP, Prolog

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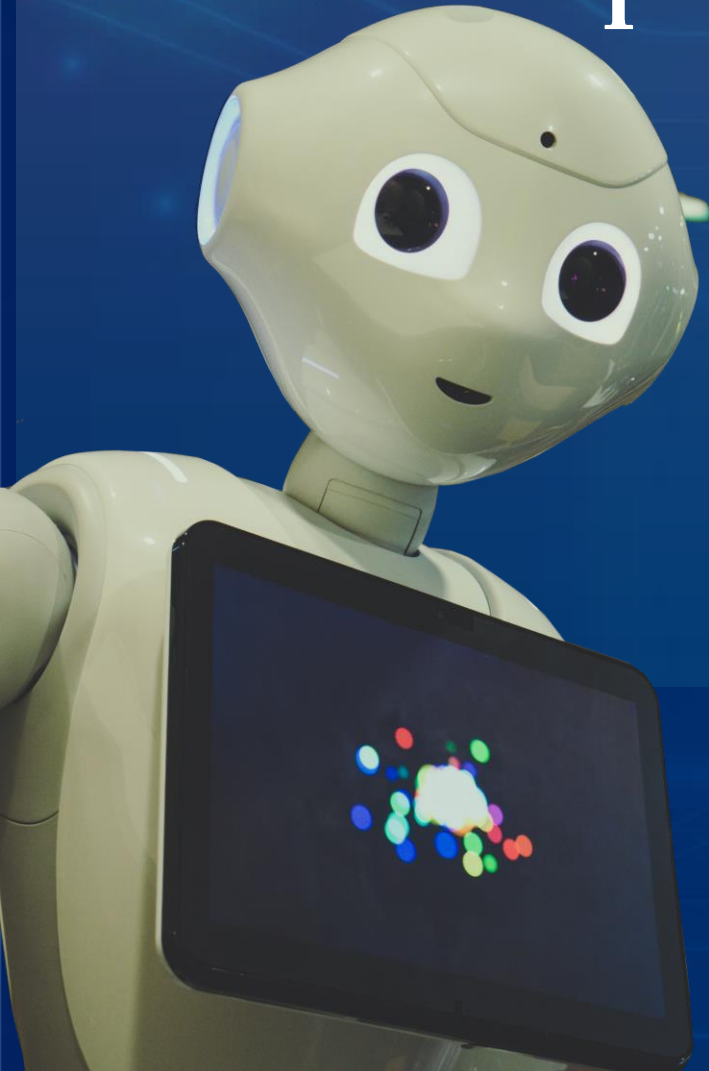
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Examples: LISP, Prolog

# What is prolog?



→ is a logic programming language, Prolog is a declarative language that a program consists of data based on the facts and rules. That means, we can specify what problem we want to solve rather than how to solve it.

→ Facts and rules use predicates which represent relationships among data objects.



# Relationships

## Example:

John owns the book

- The relationship: ownership
- The objects: book, John

## Directional :

- John owns the book
- Not: The book owns John

# Programming in Prolog



Example:

```
teacher (naama).
```

```
?- teacher(naama).  
true.
```

```
?- teacher(X).  
X=naama.
```

الحقائق Facts

الاستفسارات Query

# Programming in Prolog

القوانين Rules

`mother(X,Y):- parent(X,Y),female(X).`

head

body

`max(X,Y,Z):- X>Y ,Z is X.`



# Programming in Prolog

- Declaring Facts: about objects and their relationships .
- Defining Rules: about objects and their relationships .
- Asking Questions: about objects and their relationships

# Software

<https://www.swi-prolog.org/download/stable/bin/swipl-8.2.3-1.x64.exe>



# Thank You

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