PLANIT TEACHERS

Student Name: _____

Class: _____

Due Date: _____

Introduction to Artificial Intelligence

What is Artificial Intelligence (AI)?

Artificial Intelligence (AI) refers to the development of computer systems that can perform tasks that typically require human intelligence, such as learning, problem-solving, and decision-making.
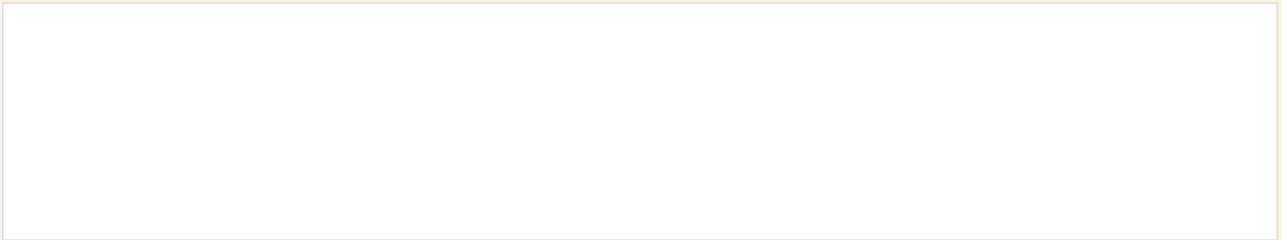
How is AI used in our daily lives?

- Virtual assistants like Siri, Alexa, and Google Assistant
- Image recognition and facial recognition technology
- Self-driving cars and autonomous vehicles
- Personalized recommendations on streaming services and social media

Write a short paragraph explaining what you think AI is and how it affects your life.
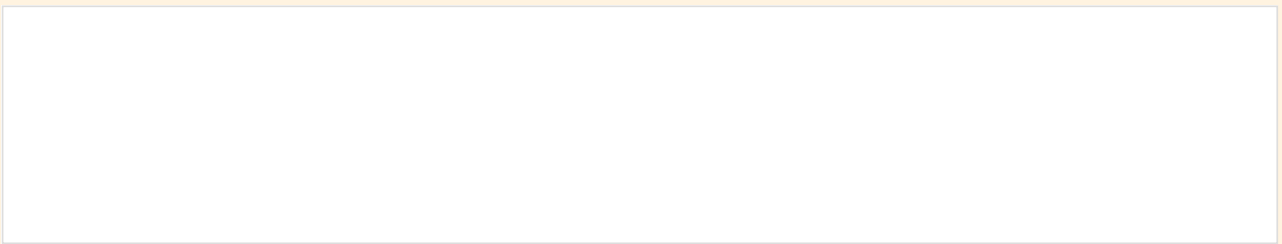
AI Applications

List five examples of AI applications in real-life scenarios:

1. Virtual assistants
2. Image recognition and facial recognition technology
3. Self-driving cars and autonomous vehicles
4. Personalized recommendations on streaming services and social media
5. Medical diagnosis and healthcare

Draw a diagram or picture to illustrate one of the AI applications you listed.

Write a short paragraph explaining how AI is used in that application.

Machine Learning

What is machine learning?

Machine learning is a type of AI that allows computers to learn from data and improve their performance on a task without being explicitly programmed.

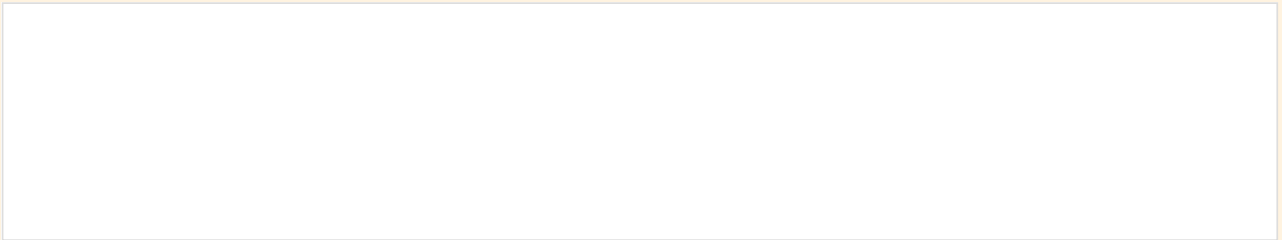**How does machine learning differ from traditional programming?**

Machine learning differs from traditional programming in that it enables computers to learn from data and make decisions based on that data, rather than following a set of pre-defined rules.

Complete the following sentence: "Machine learning is a type of AI that allows computers to _____."
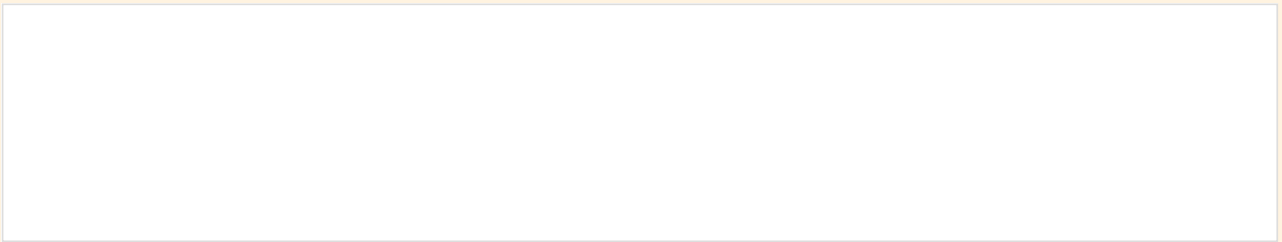
What are some potential risks or concerns associated with AI development and use?

- Job displacement and unemployment
- Bias and discrimination in AI decision-making
- Privacy and data security concerns
- Autonomous weapons and military applications

Write a short essay (less than 250 words) discussing the importance of considering ethics in AI development.

Draw a comic strip or illustration depicting a scenario where AI raises ethical concerns.

AI in Healthcare

How is AI used in healthcare?

AI is used in healthcare to analyze medical images, diagnose diseases, develop personalized treatment plans, and improve patient outcomes.

List three examples of AI applications in healthcare:

1. Medical diagnosis and image analysis
2. Personalized medicine and treatment planning
3. Patient data analysis and predictive analytics

Write a short paragraph explaining how AI can improve healthcare outcomes.

AI in Education

How is AI used in education?

AI is used in education to personalize learning, adapt to individual student needs, and improve student outcomes.

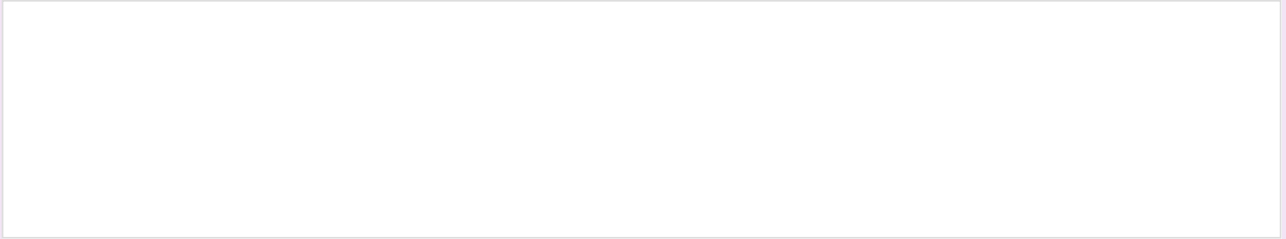**List three examples of AI applications in education:**

1. Personalized learning and adaptive assessments
2. Intelligent tutoring systems and virtual teaching assistants
3. Automated grading and feedback systems

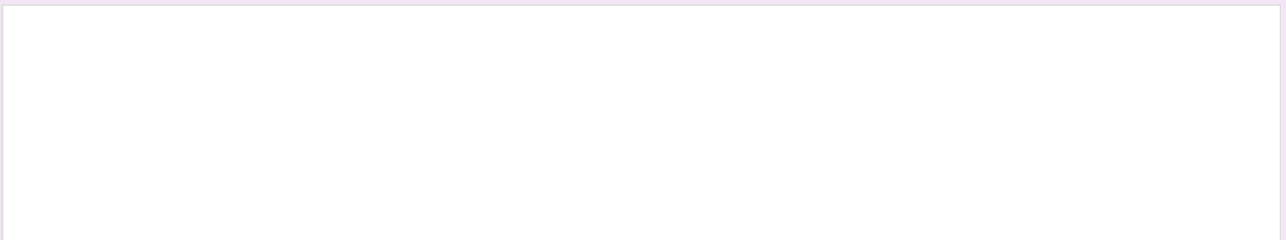**Write a short paragraph explaining how AI can enhance the learning experience.**

AI Project Idea

Think of a real-world problem that you would like to solve using AI.

Write a short paragraph describing your problem and how you would use AI to solve it.

Draw a diagram or picture to illustrate your idea.

AI Vocabulary

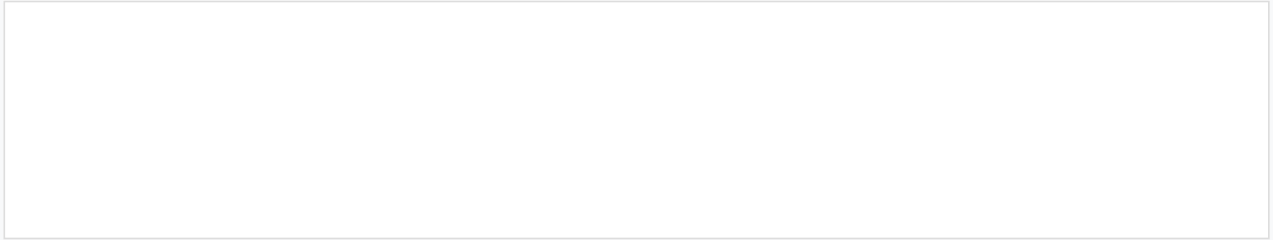**Match the following AI-related terms with their definitions:**

- Machine learning
- Natural language processing
- Computer vision
- Deep learning

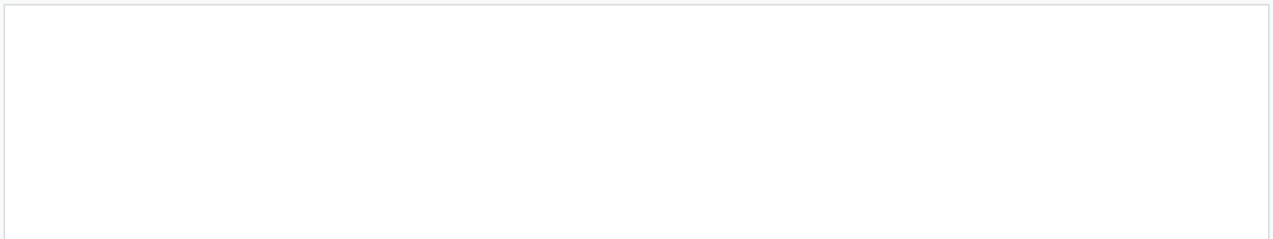**Write a short paragraph using at least three of the vocabulary words correctly.**

Read the following statement: "AI will replace human teachers in the future."

Write a short essay (less than 250 words) arguing for or against the statement.
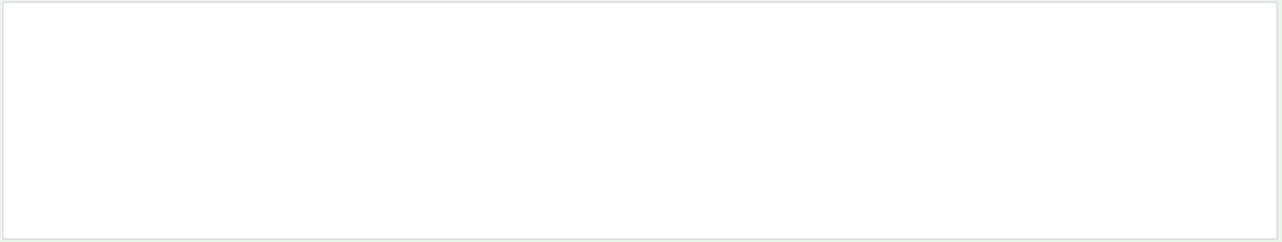
Draw a diagram or illustration depicting your argument.
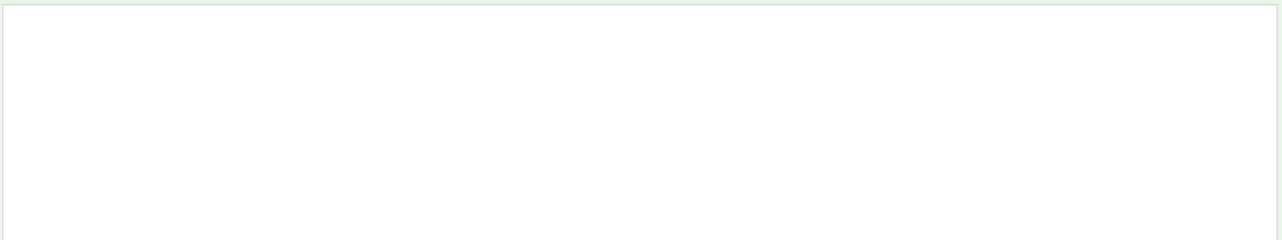
Conclusion

What did you learn about AI from this homework sheet?

Write a short reflection (less than 100 words) on what you found most interesting or surprising.

Draw a picture or symbol representing your favorite AI concept or application.