AI Project

Each team will develop a code for a specific type of intelligent agent. The type of agent should be chosen based on its relevance to solving real-world problems or its ability to perform various tasks effectively.

Requirements:

Your agent must be capable of performing multiple tasks, demonstrating the AI techniques and concepts you've learned throughout the term. Specifically, the project should include the following:

1. **Search Algorithm**: Implement a search algorithm for your agent. Be sure to explain why you chose this particular algorithm (e.g., A* search, Depth-First Search, Breadth-First Search), and how it helps your agent solve the problem at hand.
2. **Machine Learning Integration**: Use a machine learning algorithm to allow your agent to learn from data and perform another task. This can be:
    - A **supervised learning** task (e.g., classification)
    - A **Multi-layer Perceptron (MLP)** neural network for more complex decision-making.

    Explanation: Provide a detailed explanation of the machine learning technique used, including why you chose it and how it helps the agent accomplish its goals.
3. **Presentation**:
    - Prepare a **presentation** summarizing your project. Your presentation should include:
        - Describe the type of agent you selected and the problem it aims to solve.
        - Explain the search algorithm and machine learning method you used.
        - Results and performance of your agent in completing the tasks.
        - Any potential improvements or future work.
4. **Recorded video for presentation and Demo**:
    - Prepare a **recorded video** (approximately 10–15 minutes) that includes both your presentation and the live demo of your agent in action.
    - The recorded video should clearly demonstrate your agent's decision-making process, highlighting both the search algorithm and how it leverages machine learning.
    - **Upload the video** to a Google Drive and share the link.

Deliverables:

A **final code** you implement for your agent with all tasks, a **presentation** with slides summarizing your project, and a recorded video showing your agent performing the tasks.