

Types of Intelligent Agents:

1. Simple Reflex Agents:

- **Description:** Reacts to the current percept (sensory input) without considering the history or having an internal state.
- **Example:** A thermostat that turns on the heating when the temperature falls below a certain level.

2. Model-Based Reflex Agents:

- **Description:** Maintains an internal model of the environment and considers the current percept along with past percepts.
- **Example:** A chess-playing program that remembers past moves to make decisions.

3. Goal-Based Agents:

- **Description:** Operates by selecting actions that lead to states considered desirable or goal states.
- **Example:** An autonomous vehicle navigating through traffic to reach a destination.

4. Utility-Based Agents:

- **Description:** Evaluates actions based on a utility function, considering the desirability of outcomes.
- **Example:** A smart home system that adjusts heating, lighting, and other parameters to maximize user comfort.

5. Learning Agents:

- **Description:** Adapts and improves its performance over time through learning from experience.
- **Example:** An email spam filter that learns to identify spam based on user feedback.

6. Perception-Based Agents:

- **Description:** Focuses on interpreting and understanding sensory input from the environment.
- **Example:** Image recognition software that identifies objects in pictures.

7. Robotic Agents:

- **Description:** Physical agents that operate in the real world, taking actions and perceiving through sensors.
- **Example:** A robot vacuum cleaner that navigates a room, avoiding obstacles, and cleaning.