**Typical Intelligent Agents**

Intelligent agents are software entities that can perceive their environment, reason about it, and take actions to achieve their goals. They can be categorized based on their capabilities, architecture, and application domains. Here are some typical examples:

**Based on Capabilities:**

* **Reactive agents:** These agents respond directly to their environment without any internal state or planning. They are suitable for simple tasks like controlling robots or traffic lights.
* **Memory-based agents:** These agents store past experiences and use them to make decisions. They are useful for tasks that require learning from experience, such as game-playing or recommendation systems.
* **Goal-based agents:** These agents have a goal and use planning to achieve it. They are suitable for complex tasks that require long-term planning, such as navigation or logistics.
* **Utility-based agents:** These agents maximize their utility, which is a measure of their happiness or satisfaction. They are useful for tasks that involve making trade-offs between different goals, such as resource allocation or decision-making.

**Based on Architecture:**

* **Rule-based agents:** These agents use rules to reason about their environment and make decisions. They are suitable for tasks that can be defined by a set of rules, such as expert systems or game-playing.
* **Neural network agents:** These agents use neural networks to learn from data and make decisions. They are suitable for tasks that require learning from large amounts of data, such as image recognition or natural language processing.
* **Hybrid agents:** These agents combine different architectures to achieve their goals. They are suitable for complex tasks that require a combination of different reasoning methods.

**Based on Application Domains:**

* **Virtual assistants:** These agents can understand and respond to natural language queries, making them useful for customer service, information retrieval, and task automation.
* **Autonomous vehicles:** These agents can perceive their environment, reason about it, and make decisions to navigate safely.
* **Robotics:** These agents can control robots to perform tasks in the real world, such as manufacturing, exploration, or healthcare.
* **Game-playing agents:** These agents can play games against human or computer opponents, demonstrating their ability to learn and adapt.
* **Recommendation systems:** These agents can suggest products or services to users based on their preferences and past behaviour.