Live AI Agentic RAG

Ask about LLM Agents:

What is task decomposition?

Run Agent

Answer

Task decomposition is the process of breaking down a complex task into smaller, more manageable subtasks or steps. This allows an agent or system to plan and execute the task in a more organized and efficient manner. By decomposing a task into smaller components, the agent can focus on one step at a time, reducing the complexity and increasing the chances of success.

In the context of artificial intelligence and machine learning, task decomposition is often used to enable systems to perform complex tasks that would be difficult or impossible to accomplish in a single step. By breaking down the task into smaller subtasks, the system can use various techniques, such as planning, reasoning, and problem-solving, to achieve the desired outcome.

Task decomposition can be achieved through various methods, including:

1. Using task-specific instructions, such as writing a story outline for writing a novel.
2. Relying on external classical planners, such as the Planning Domain Definition Language (PDDL), to generate a plan.
3. Using language models, such as Large Language Models (LLMs), to translate the problem into a format that can be understood by a planner or to generate a plan in natural language.
4. Using human inputs to guide the decomposition process.

Task decomposition is an essential component of many AI and ML applications, including planning, decision-making, and problem-solving. It enables systems to tackle complex tasks in a more structured and efficient way, leading to improved performance and accuracy.