

Architecture Diagram



Agent Flow Explanation:

The Agentic AI system receives a high-level user goal and autonomously decomposes it into multiple subtasks using a planning module. The executor sequentially performs these subtasks by invoking external tools for searching recent AI research papers, summarizing their content, and storing the results. A memory module is used to maintain context and store intermediate outputs during execution. Finally, the agent produces a structured JSON output containing summarized information of the top three research papers, demonstrating autonomous reasoning, tool orchestration, and context handling.

SAMPLE OUTPUT

Goal: Find the top 3 recent AI research papers on agriculture, summarize them, and store the output in a structured format.

- ◆ Planning steps...
 - Search for recent AI research papers on agriculture
 - Select top 3 relevant papers
 - Summarize the papers
 - Store results in structured format

Final Output:

```
{  
  "goal": "Find the top 3 recent AI research papers on agriculture, summarize them, and store the output in a structured format.",  
  "generated_on": "2026-02-07T16:25:30.951872",  
  "results": [  
    {  
      "paper_id": 1,  
      "title": "Deep Learning for Crop Yield Prediction",  
      "authors": "A. Sharma et al.",  
      "year": 2024,  
      "summary": "The paper 'Deep Learning for Crop Yield Prediction' focuses on applying artificial intelligence techniques to agricultural problems. It proposes innovative methods to improve efficiency, decision-making, and sustainability in farming systems."  
    },  
    {  
      "paper_id": 2,
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        "title": "AI-Based Pest Detection in Smart Agriculture",  
        "authors": "L. Wang et al.",  
        "year": 2023,  
        "summary": "The paper 'AI-Based Pest Detection in Smart Agriculture' focuses on applying  
artificial intelligence techniques to agricultural problems. It proposes innovative methods to improve  
efficiency, decision-making, and sustainability in farming systems."  
    },  
    {  
        "paper_id": 3,  
        "title": "Reinforcement Learning for Precision Irrigation",  
        "authors": "M. Gonzalez et al.",  
        "year": 2023,  
        "summary": "The paper 'Reinforcement Learning for Precision Irrigation' focuses on applying  
artificial intelligence techniques to agricultural problems. It proposes innovative methods to improve  
efficiency, decision-making, and sustainability in farming systems."  
    }  
]
```