Core Components of CrewAI

Instructor

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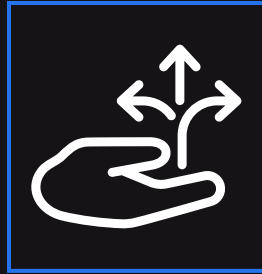
Agents

An agent is an autonomous unit programmed to:
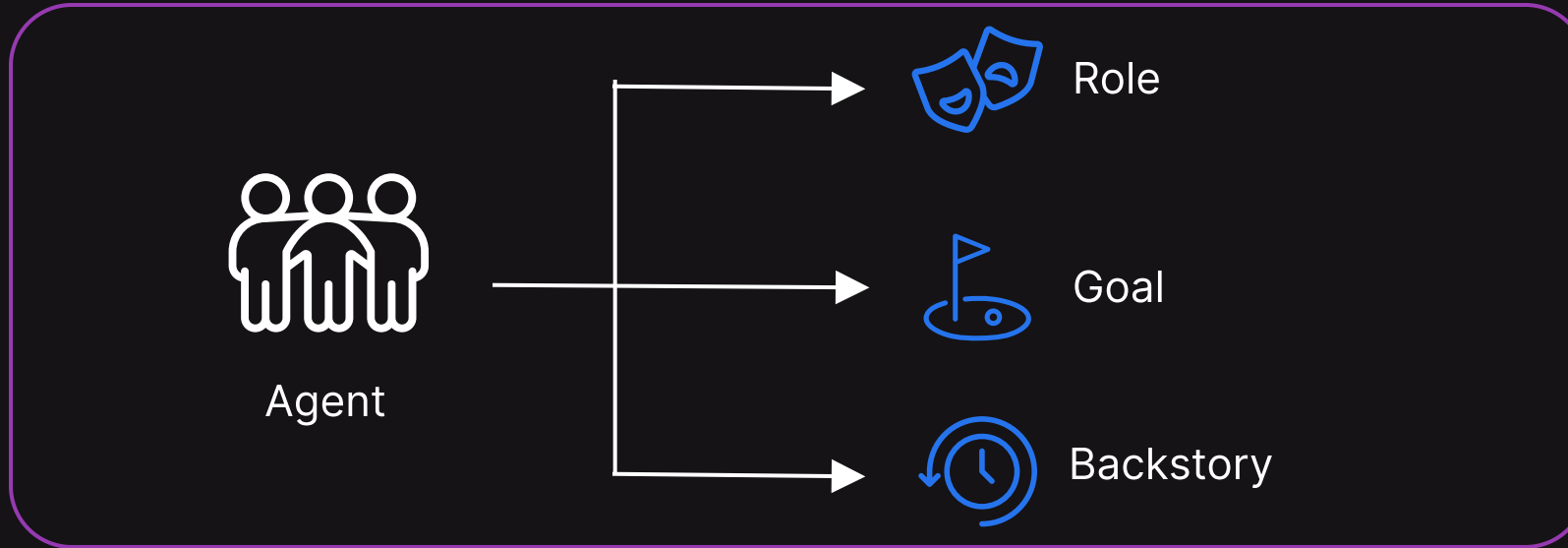

Perform tasks

Make decisions
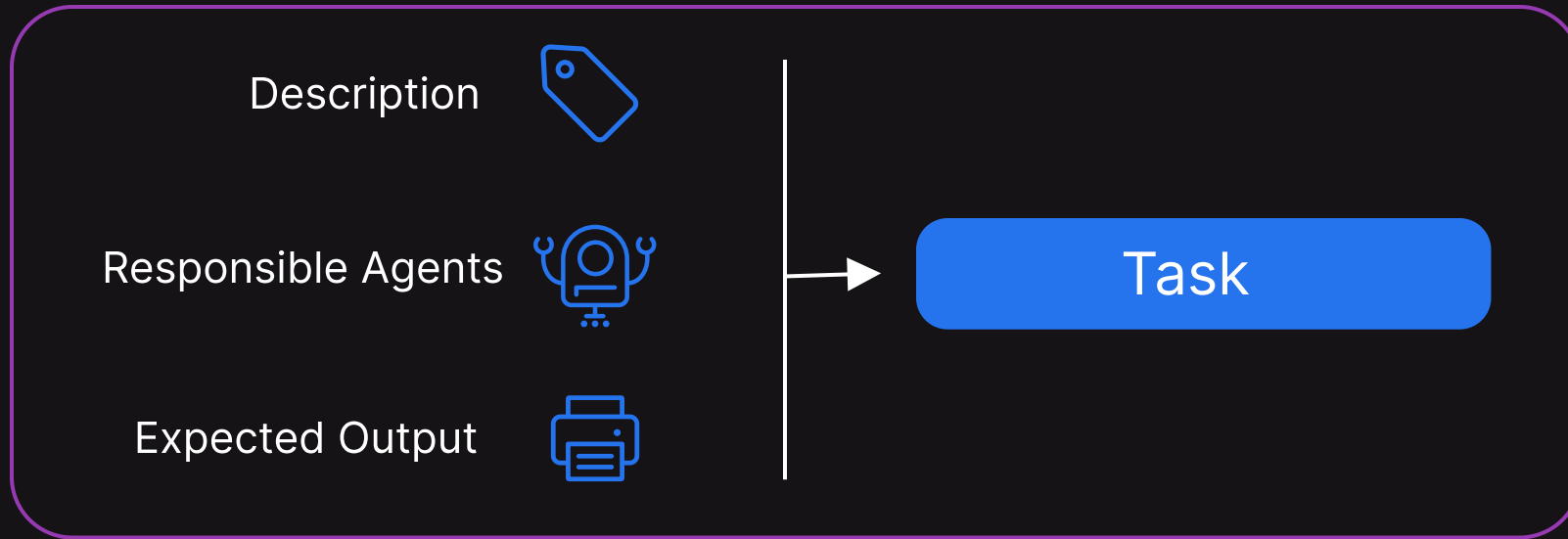

Agent communication

Agents


```python
from crewai import Agent

agent2 = Agent(
    role="agent role",
    goal="summarize the short bio for {input} and if needed do more research",
    backstory="agent backstory",
    verbose=True,
)
```

Tasks


```python
from crewai import Task

task = Task(
    description='Find and summarize the latest and most relevant news on AI',
    agent=sales_agent,
    expected_output='A bullet list summary of the top 5 most important AI news',
)
```

Crews

CrewAI → Group of Agent → Tasks

| Task Execution | Agent Collaboration | Workflow |

```python
from crewai import Crew

# Assemble the crew with a sequential process
my_crew = Crew(
    agents=[researcher, writer],
    tasks=[research_task, write_article_task],
    process=Process.sequential,
    full_output=True,
    verbose=True,
)
```

Processes

Processes acts as orchestration layers in CrewAI to manage and execute tasks assigned to agents. Predefined strategies are:

1 Sequential

2 Hierarchial

3 Consensual

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```

Analytics
Vidhya

LLM Agnostic

Compatible with any language model.

Flexibility

Switching Models

```python
from crewai import LLM, Agent

llm = LLM(
    model="gpt-4-custom",
    base_url="https://api.provider.com/v1",
    api_key="your-api-key"
)
agent = Agent(llm=llm, tasks=["task1", "task2"])
```

Analytics Vidhya

Thank You