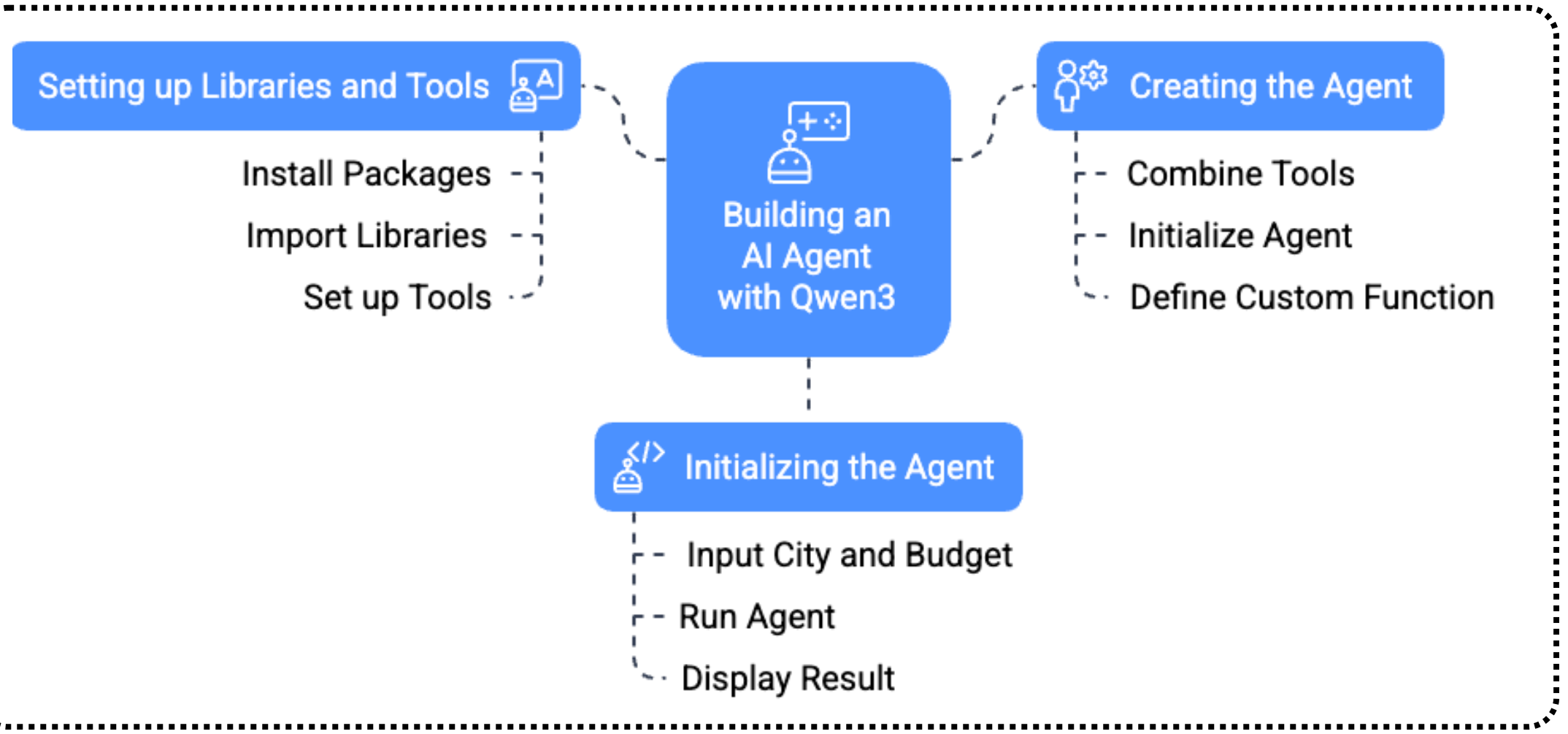
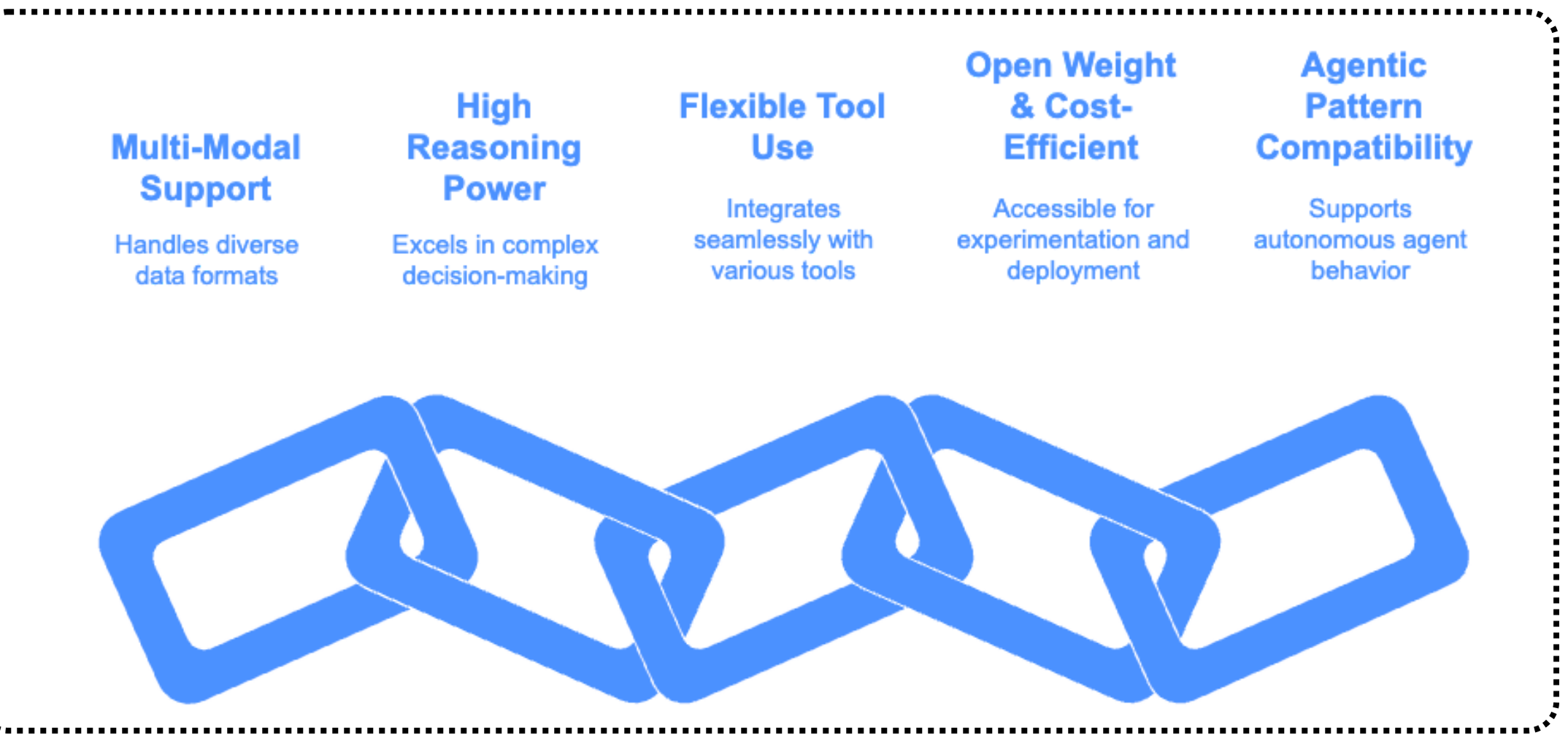
Analytics Vidhya

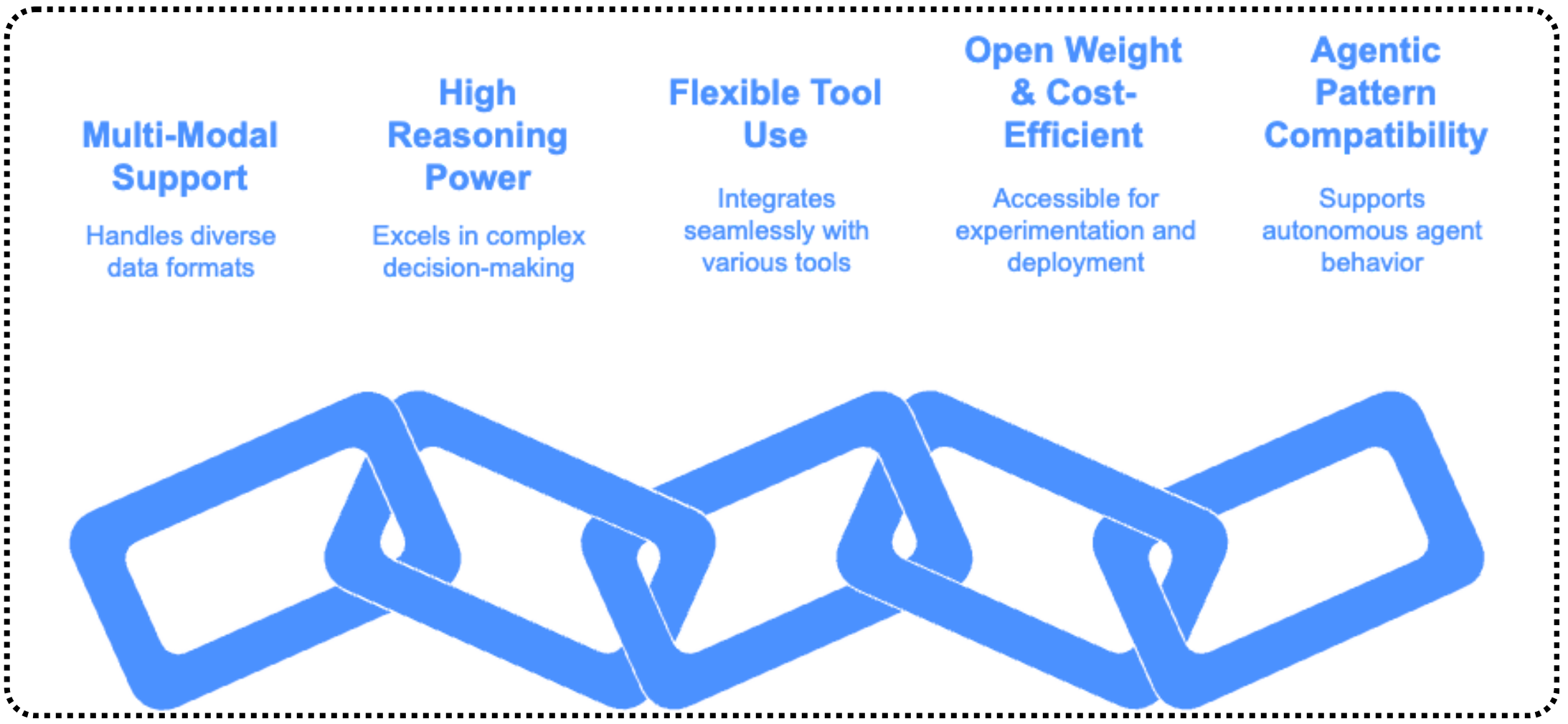
Building a Travel Planner Agent with Qwen 3





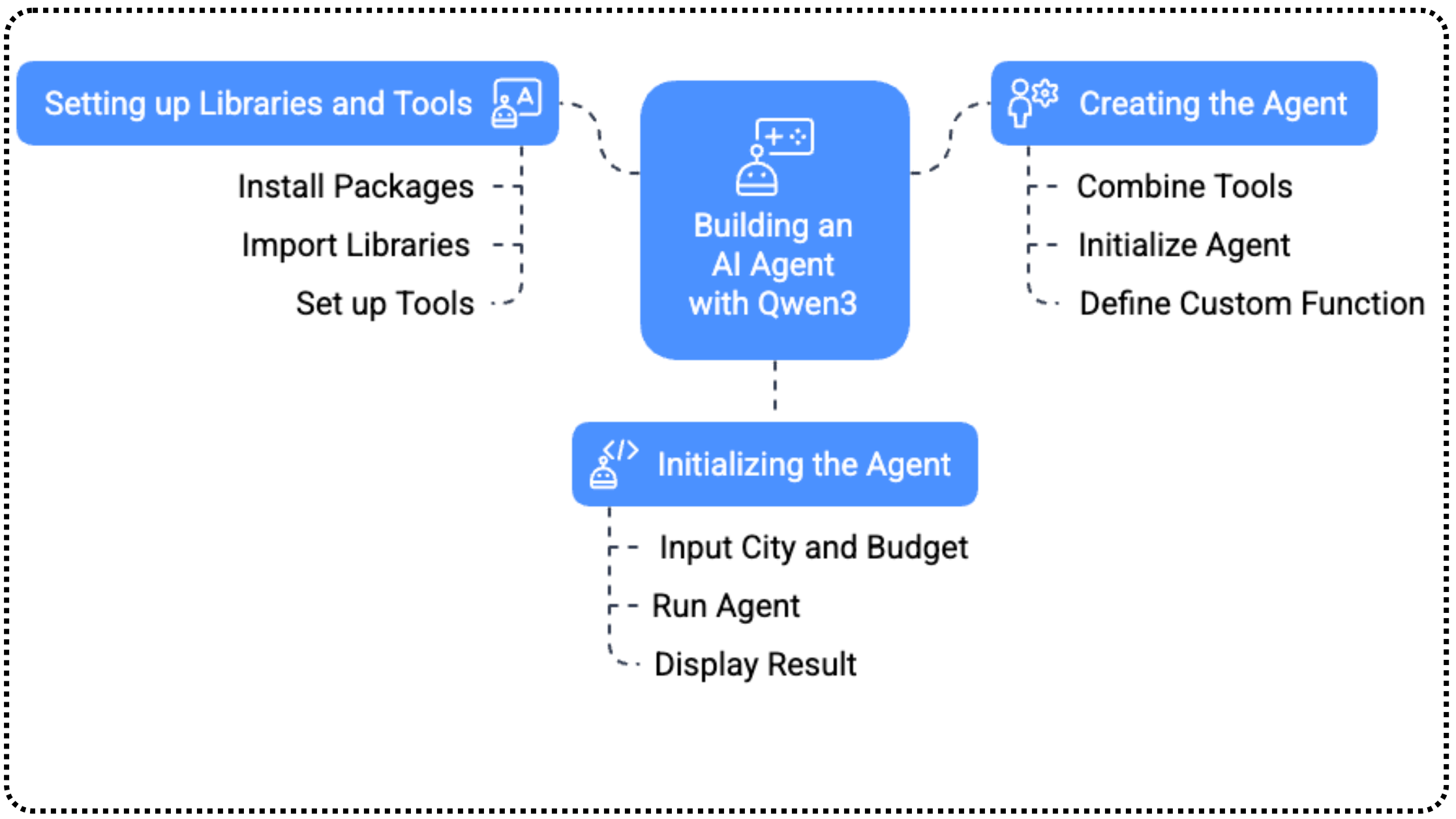
Why Use Qwen3 for Building Agents?

Qwen3 is a great fit for **building AI agents** thanks to its **multi-modal support**, **handling text**, **images**, **audio**, and **video**. It offers strong reasoning capabilities, excels in tool integration with LangChain and OpenRouter, and is open-weight and cost-efficient. It also supports key **agentic patterns** like **zero-shot reasoning** and **reflection**, making it ideal for intelligent, adaptive agent workflows.



Steps to Build a Travel Planner Agent

We'll be using Qwen3 to create an AI-powered travel agent that will give the major traveling spots for the city or place you are visiting. We will also enable the agent to search the internet to find updated information, and add a tool that enables currency conversion.



Step 1: Setting up Libraries

- **Search_tool:** DuckDuckGoSearchRun() enables the agent to use web search to get real-time information about the popular tourist spots.
- **DestinationTool:** Applies the get_destinations() function, which uses the search tool to get the top 3 tourist spots in any given city.
- **CurrencyTool:** Uses the convert_usd_to_inr() function to convert the prices from USD to INR. You can change ‘inr’ in the function to convert it to a currency of your choice.

```
!pip install langchain langchain-community openai duckduckgo-
search
from langchain.chat_models import ChatOpenAI
from langchain.agents import Tool
from langchain.tools import DuckDuckGoSearchRun
from langchain.agents import initialize_agent


llm = ChatOpenAI(
    base_url="https://openrouter.ai/api/v1",
    api_key="your_api_key",
    model="qwen/qwen3-235b-a22b:free"
)
# Web Search Tool
search = DuckDuckGoSearchRun()


# Tool for DestinationAgent
def get_destinations(destination):
    return search.run(f"Top 3 tourist spots in {destination}")


DestinationTool = Tool(
    name="Destination Recommender",
    func=get_destinations,
    description="Finds top places to visit in a city"
)
```

Step 2: Creating the Agent

- **initialize_agent:** Creates an agent in LangChain using a zero-shot approach that interprets tool descriptions.
- **agent_type:** "zero-shot-react-description" lets the LLM choose tools based on input and tool descriptions, without prior training.
- **verbose:** Enables logs to track the agent's decisions and tool usage.
- **trip_planner:** A manual function that calls tools directly, giving users control over which tool to use.

```
tools = [DestinationTool, CurrencyTool]


agent = initialize_agent(
    tools=tools,
    llm=llm,
    agent_type="zero-shot-react-description",
    verbose=True
)
def trip_planner(city, usd_budget):
    dest = get_destinations(city)
    inr_budget = convert_usd_to_inr(f"{usd_budget} USD to
INR")return f"""Here is your travel plan:


*Top spots in {city}*:
{dest}
*Budget*:
{inr_budget}
Enjoy your day trip!"""
```

Step 3: Initializing the Agent

Invocation of agent: agent.run() uses the user's intent via prompt and plans the trip.

```
# Initialize the Agent
city = "Delhi"
usd_budget = 8500


# Run the multi-agent planner
response = agent.run(f"Plan a day trip to {city} with a budget of {usd_budget}
USD")IPython.display import Markdown, display
display(Markdown(response))
```

Output

With a budget of 8500 USD (≈707,200 INR), here's a day trip plan for Delhi:

1. **Morning**: Start at the **Red Fort**, a UNESCO World Heritage Site, to explore Mughal architecture and history. Adjacent is **Jama Masjid**, one of India's largest mosques.
2. **Lunch**: Head to **Chandni Chowk** for street food like parathes or enjoy a meal at a heritage restaurant like **Karim's**.
3. **Afternoon**: Visit **Humayun's Tomb** (UNESCO site) for its stunning gardens and Mughal design. Later, explore **India Gate** and **Rajpath** for a glimpse of colonial architecture.
4. **Evening**: Return to the Red Fort for the **light and sound show** to end the day.
5. **Transport**: Use the Delhi Metro (affordable) or taxis for convenience.
   The budget comfortably covers entry fees (~500 INR for foreigners per site), meals, transport, and shopping. For a luxurious touch, consider a heritage walk or a rickshaw ride through Old Delhi.

To know more, checkout this article

How to Build RAG Systems and AI Agents with Qwen3

Learn to build RAG systems and AI agents with Qwen's latest model - Qwen3. Explore the key...

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