AFFINE
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Microsoft
Solutions Partner

Data & AI
Azure

WHAT-IF-OPS

Empowering Supply Chain Decision making powered by Azure OpenAI

http://affine.ai/

About What-If-Ops

What-If-Ops is a revolutionary solution designed to address the complexities and uncertainties within supply chain management. It leverages a unique amalgamation of Generative AI and Knowledge Graphs to assess various scenarios, generate impacts using natural language, and facilitate decision-making and validation for users.

KEY SOLUTION COMPONENTS

1 KNOWLEDGE GRAPH

Designing knowledge graph database incorporating all the complexities of the supply chain network

2 ANALYTICAL ENGINE

Prompt Engineering to give the right context to the LLM so that it creates cypher queries with the correct logic incorporating the constraints

3 INTERACTIVE UI

The output UI displays a comparative analysis and potential solutions in the graph

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What-If-Ops Thought Process (What If Scenario)

Base Optimization

- Supply chain network analyst seeks to find an optimal options in various scenarios arising due to unforeseen reasons / availability of multiple options in the supply chain

2 Step Process

- Decomposes the user query into two scenarios – one with the constraints and the one without the constraints and its respective queries
- Performs logical reasoning and recommends a solution

3 Step Process

- Breaks down the user query into scenarios with and without the constraints
- Performs data extraction, reasoning and recommends a solution based on the retrieved data

Agent-based

- It breaks down the question that needs to be answered to obtain the complete response
- Uses thought process internally and improves the output iteratively

What-If-Ops Benefits

Reduced Complexity

Execution becomes easier through natural language queries

Faster Analysis

Significant time savings as the solution streamlines the analysis of various scenarios.

Human in the Loop

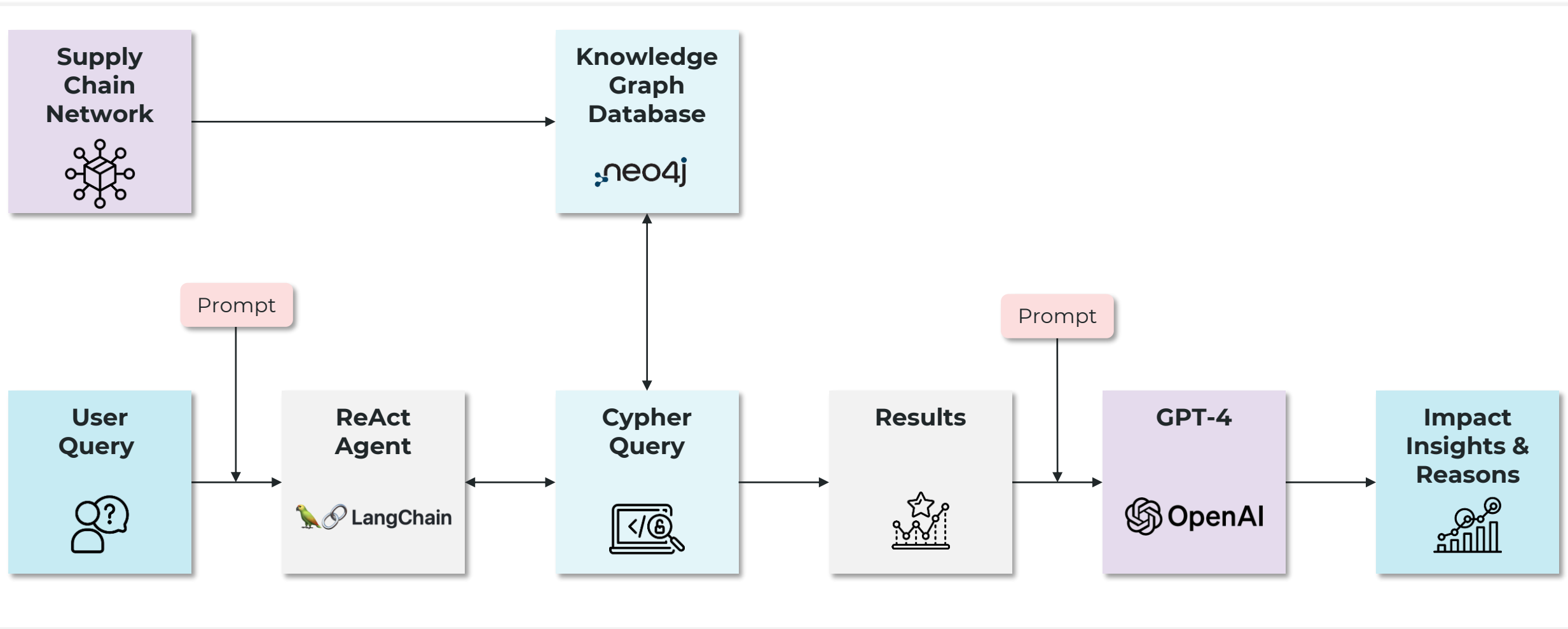Human supervision to validate the logical flow and code generation

Thorough Analysis

Easy to validate, generate optimal options and compare with alternate scenarios

WhatIfOps Architecture

THANK YOU

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