

ROBEE PROJECT

A large, stylized honeycomb structure composed of many yellow hexagons, serving as a background for the word "ROBEE".

Navigating Careers with AI-Driven Roadmaps

Plan

0

Motivation

1

Key features

2

Theory behind causality

3

Project Pipeline

3.1

Interview Preparation

3.2

Multi-agent System

4

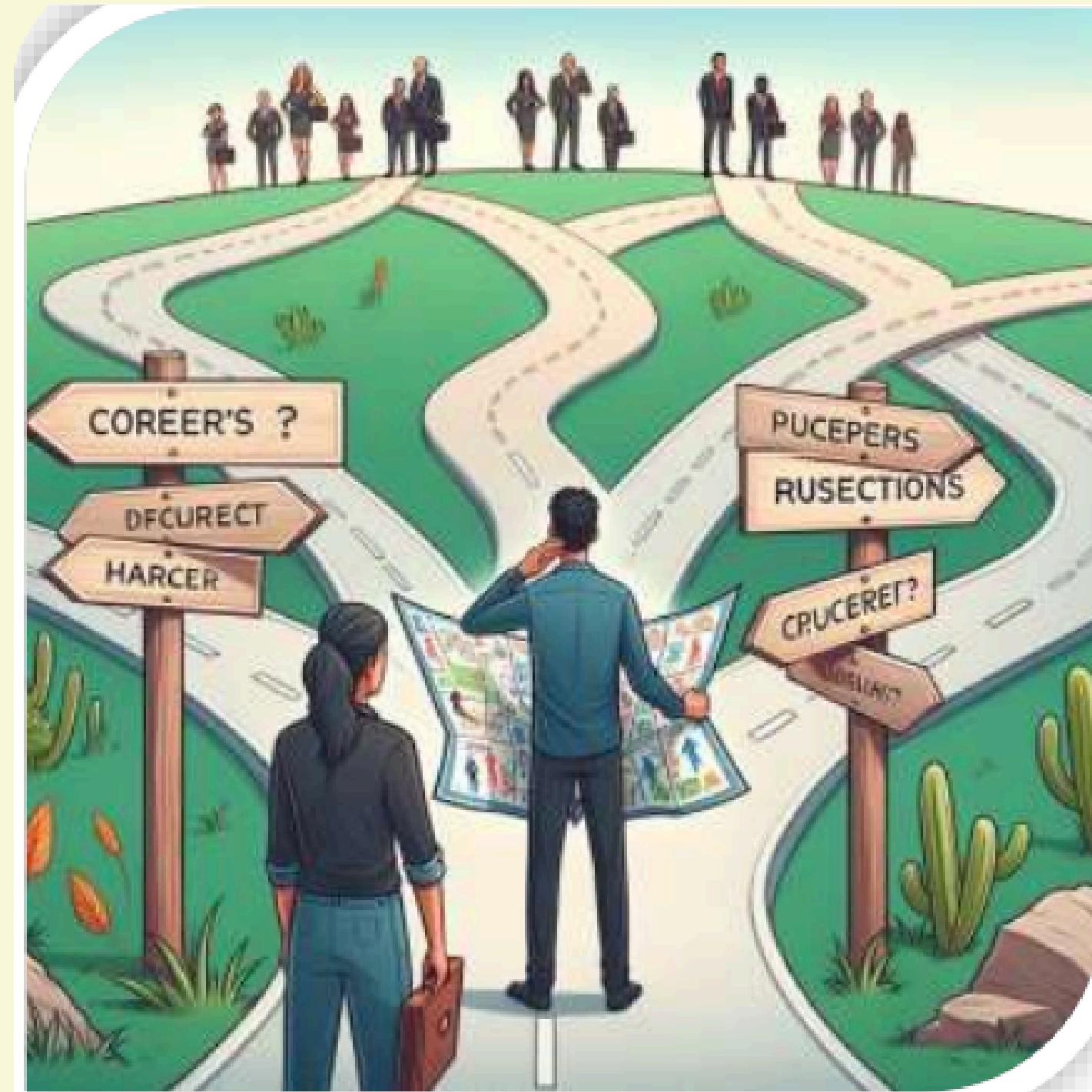
Demo

5

Conclusion

Motivation

Problem: Professional Development Limitations



Solution :Overview



Google Maps for Professional Journeys

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key features



Guided career planning

Easy to start

Smart interview process

Personalized roadmap

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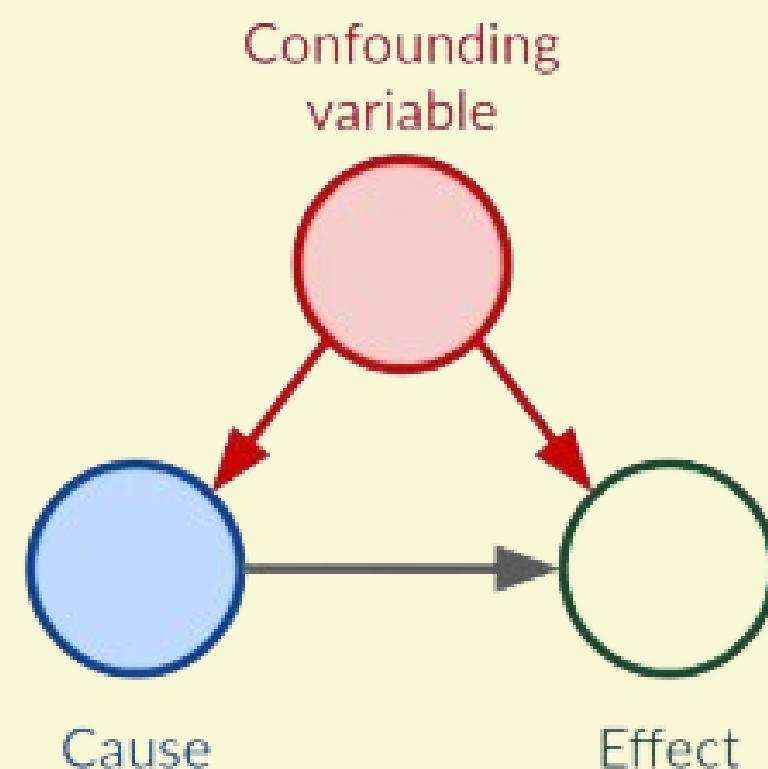
5 Conclusion

Theory behind Causality

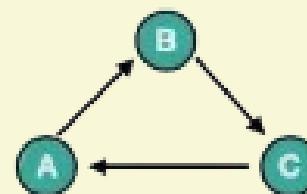
Causal Graphs and SCMs

Causal graphs (DAGs) and Structural Causal Models (SCMs) provide a mathematical backbone for representing causal relationships, including concepts like:

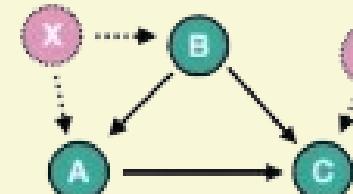
- **Confounders**: Variables causing both treatment and outcome
- **Mediators**: Variables on the causal pathway
- **Colliders**: Variables caused by multiple other variables
- **Backdoor Paths** : Non-causal paths creating spurious correlations



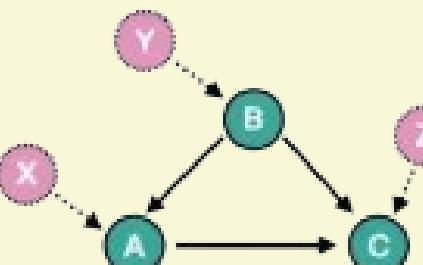
Markovian Causal Models



Not Markovian
Graph has cycle



Not Markovian
A and B share unmeasured
common cause X

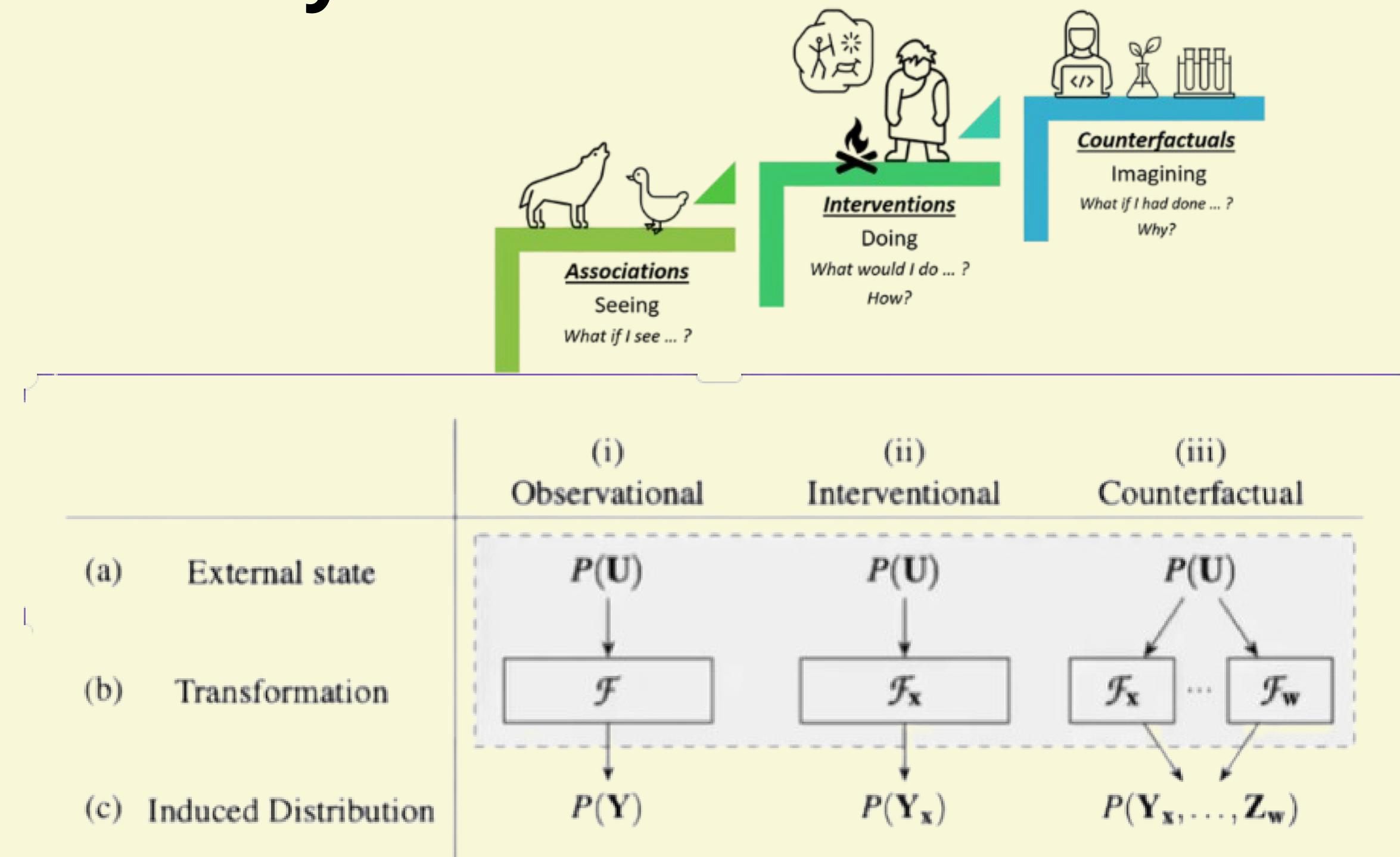


Markovian
No cycles and unmeasured
variables have no common
(direct) ancestors

○ = unobserved variable
● = observed variable

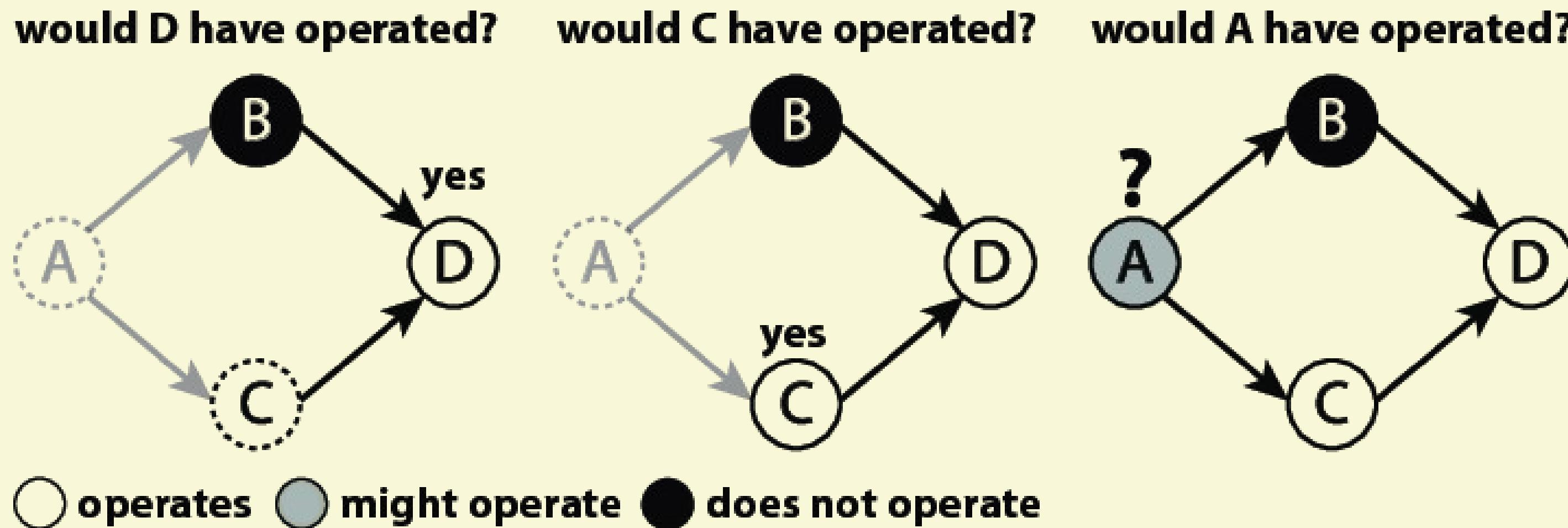
Theory behind Causality

Pearl's Hierarchy



Theory behind Causality

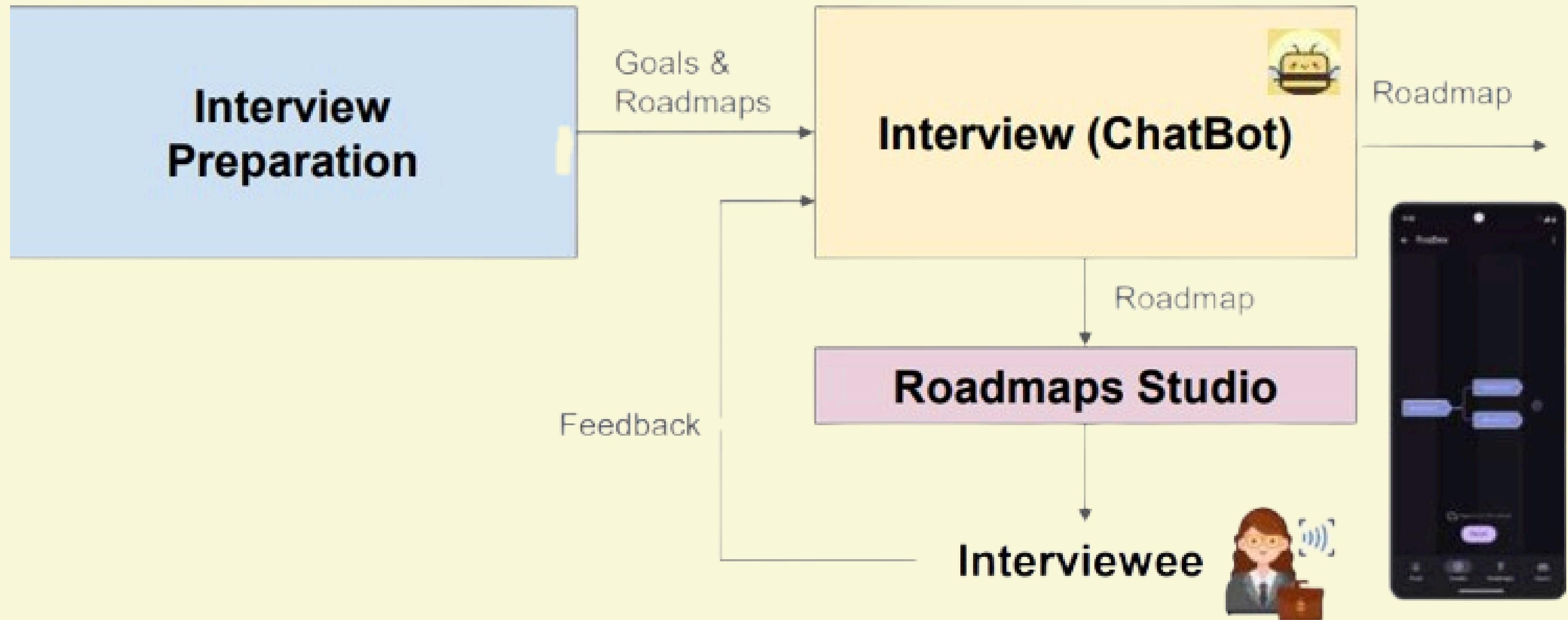
Counterfactual reasoning :



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Project Pipeline



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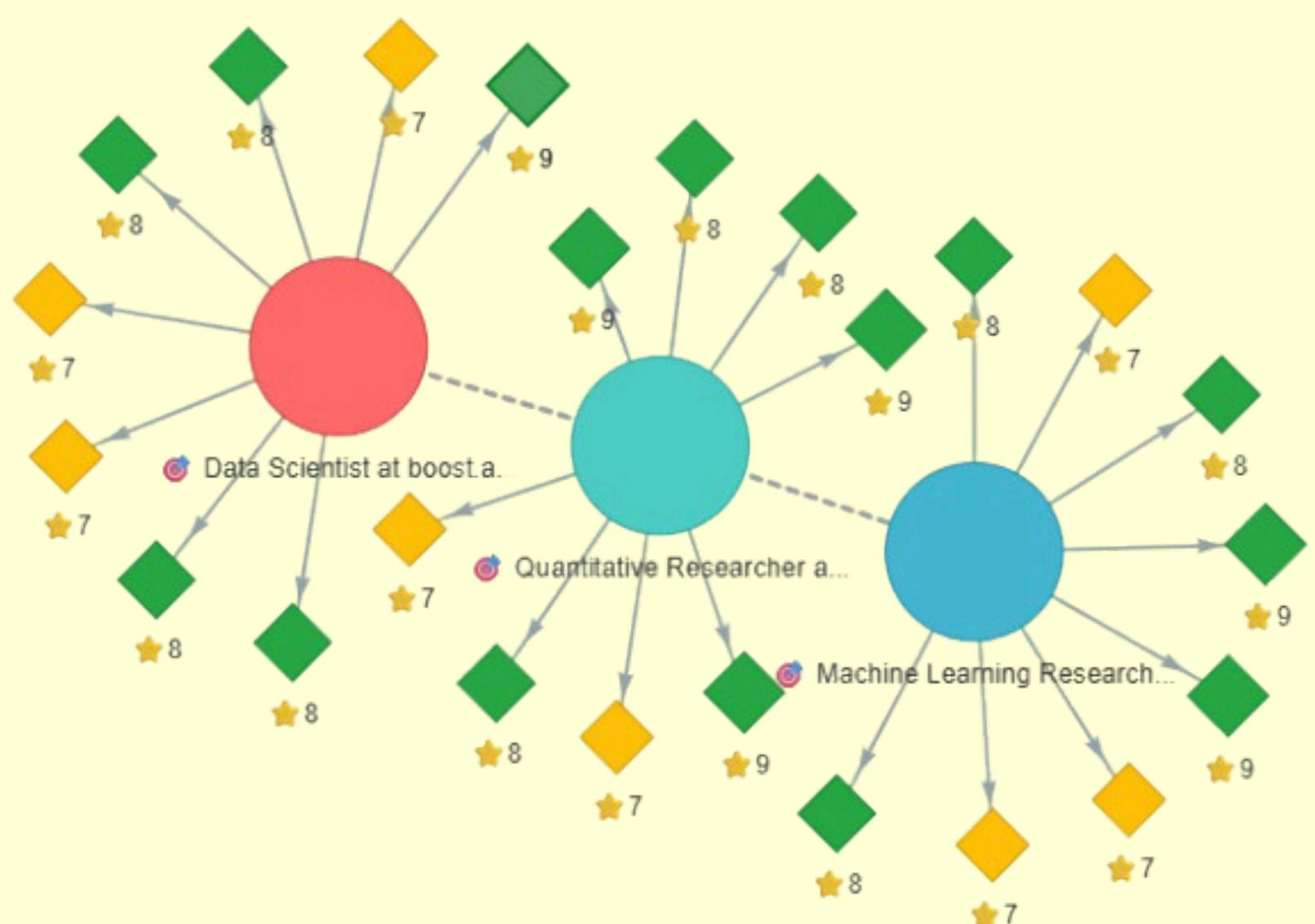
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Interview Preparation

Goal: Generate a draft roadmap

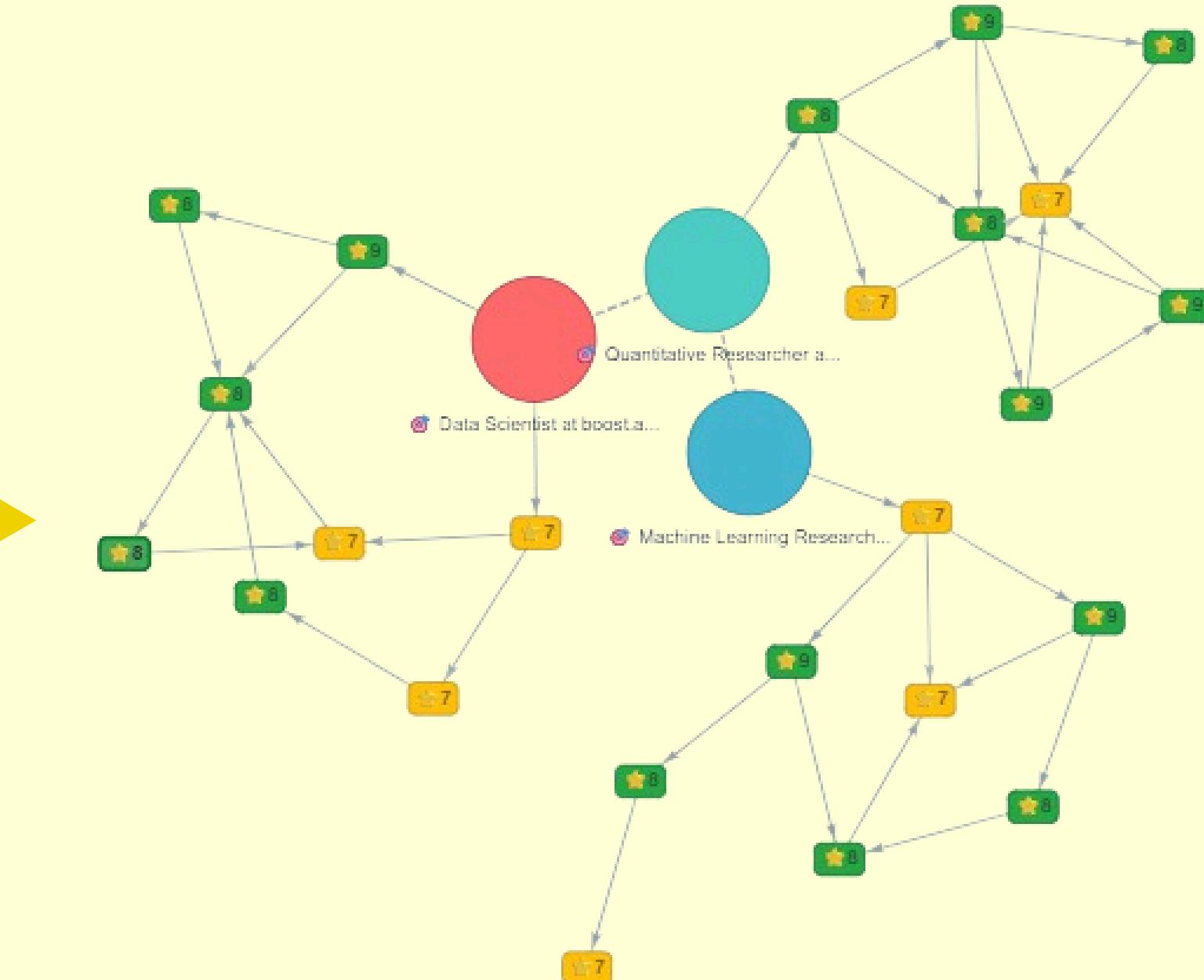
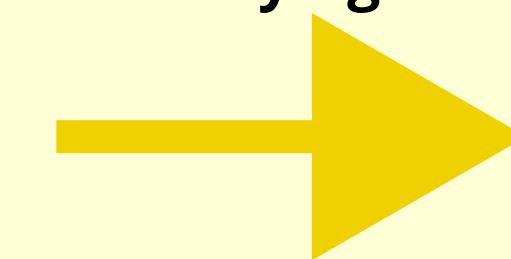


Interview Preparation



Draft roadmap

Causality Agent



Causal Draft roadmap

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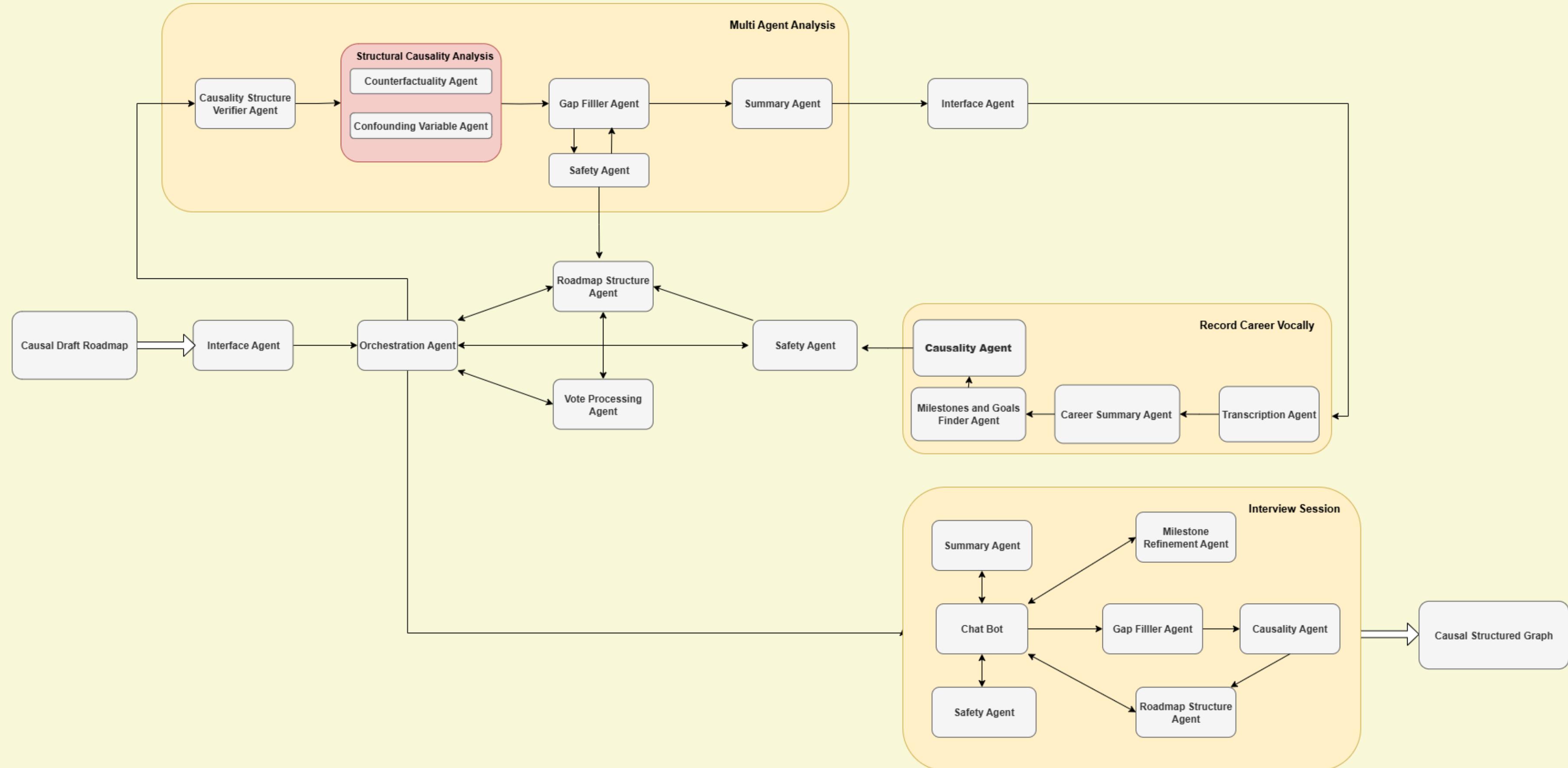
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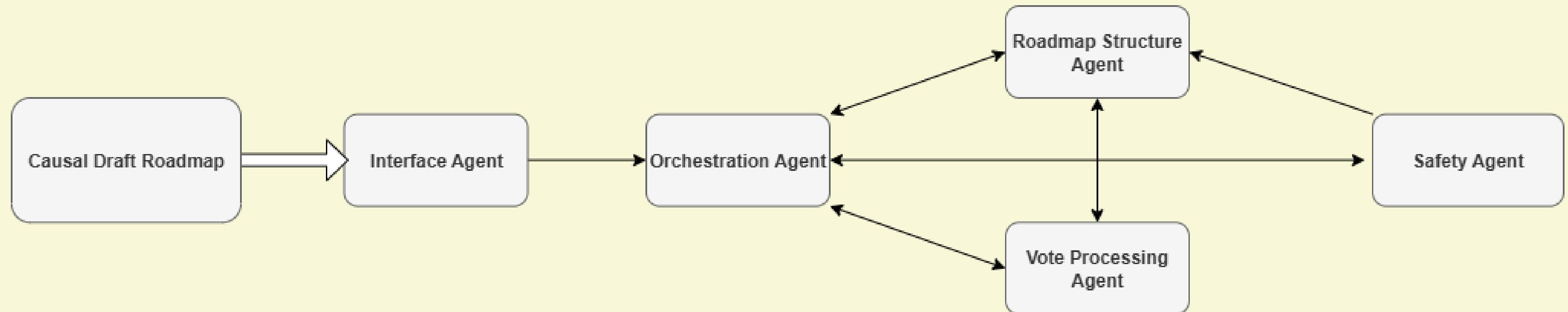
Multi-agent System

The Entire Pipeline with Different Functionalities



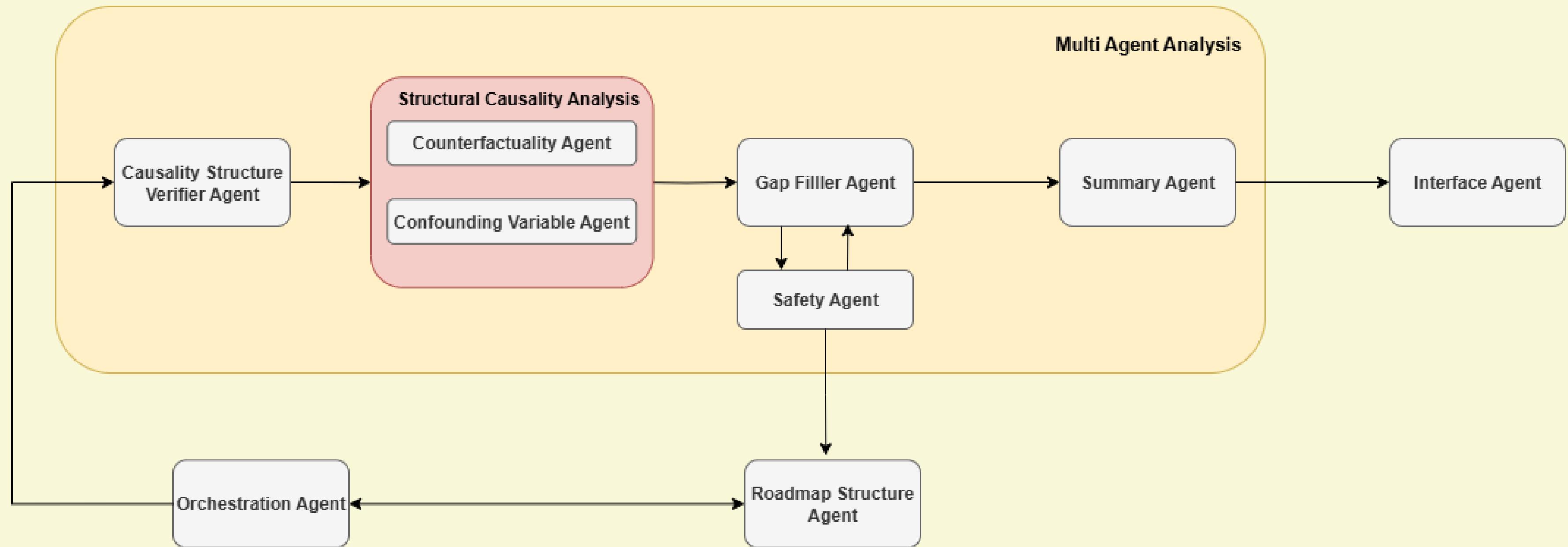
Multi-agent System

Roadmap Voting and Safety Check



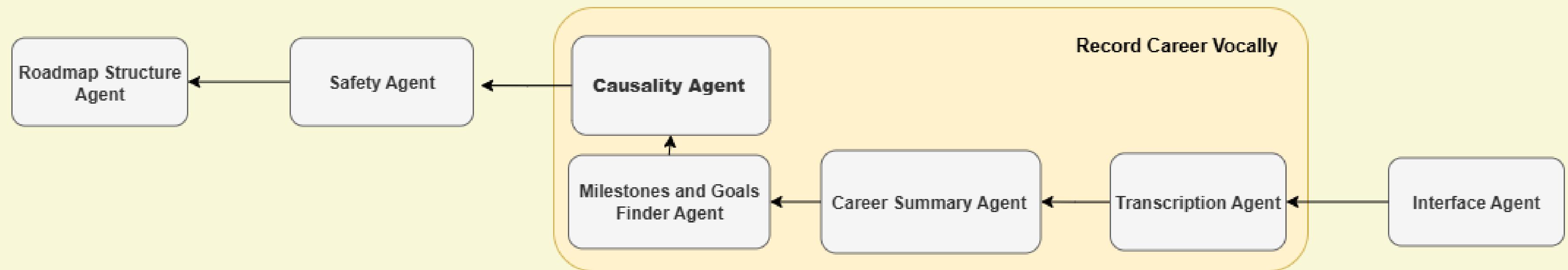
Multi-agent System

Multi Agent Analysis



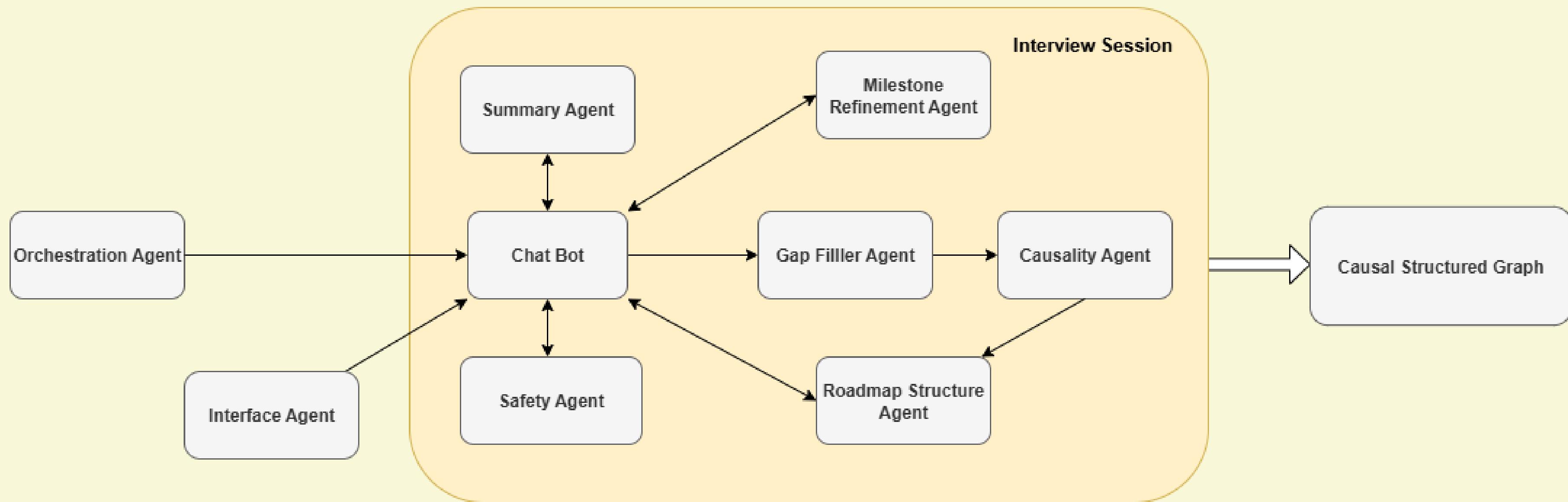
Multi-agent System

Roadmap Generation Through Recording



Multi-agent System

Interview Session



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Conclusion

-  **Proved the concept** – RoBee can generate clear, coherent career roadmaps.
-  **Validated the process** – multi-agent system works smoothly from input to final plan.
-  **Delivered tangible value** – saves time and keeps plans realistic.
-  **Confirmed adaptability** – able to handle different inputs and user contexts.
-  **Set the stage for growth** – ready for enhancements and broader testing.

Next Steps

- **Testing with diverse personas** to ensure adaptability across different career backgrounds.
- **Judge Agent integration** to better evaluate roadmap quality during the process.
- **Avatar inclusion** for a more engaging and human-like interaction.
- **Merging multiple user roadmaps** to enrich planning with collaborative and shared experiences.
- **Leveraging Crew AI** to coordinate multi-agent collaboration, streamline workflows, and enhance decision-making throughout the process.

OUR TEAM

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SPECIAL THANKS



QNA SESSION

**THANK
YOU**