Phase1: Obtaining LLM's Intuition

User limited interaction history

Inputted prompt

Please choose the metadata that is especially important and provide the elements that the next movie should have for this user.

LLM

Intuition output by LLM

From the movies the user has seen, the following themes and styles he/she would like

actor B

producer b

genre I

Phase2: Recommendation via KG Reasoning

genre I

producer b

Agent trajectory

actor A

user 1

Agent

actor B

producer a

genre II

KG environment

Training agent by reinforcement learning

Trained agent

user 1

KG path reasoning by trained agent

	Score	Rank
genre I	0.8	1
actor A	0.4	3
actor B	0.7	2
producer a	0.3	4