

Model With Knowledge  
Domain

Target of the  
conversation

### DUAL GRAPH INITIALIZATION

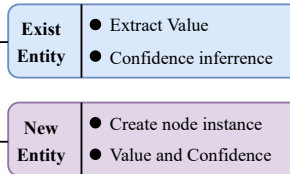
Prerequisites  
Between Entities

Relations  
Between Entities

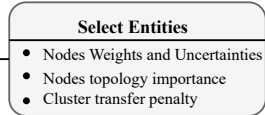
Clustering

Graph weights & topology  
update with acquired information

NO NODES LEFT  
FOR QUERY



Retrieve  
Information



### MULTI-TURN CONVERSATION

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#### EXAMPLE MESSAGE

PATIENT

- My knee hurts after gardening, but my cousin's friend had surgery and never walked again! Is this arthritis or just old age catching up?
- Often contain personal tangents, emotional concerns, and misunderstanding of doctors

#### HINT

- Collected patient entity information
- Selected entities to be collected
- Targets and requirements for the conversation

#### AI DOCTOR

- Hint messages
  - History messages
  - Conversation targets
- AI crafts doctor responses

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#### HINT

- All collected patient entity information
- Require the AI model achieve the final targets

#### AI DOCTOR

- Medical Diagnosis
- Drug Suggestions
- Lifestyle Recommendations
- Follow-up Protocols