11/7 Client Meeting

Nexteer (AI Bots) Capstone Team

Agenda

Progress in the Past Week

Goals for Next Week

Deliverable

Questions

Progress in the Past Week

1. Implemented a basic triage agent
2. Tested Auto Metadata generation from dummy documents using GPT API
3. Performed similarity search experiments with dummy data to evaluate initial model behavior.

Similarity Search with Json Metadata

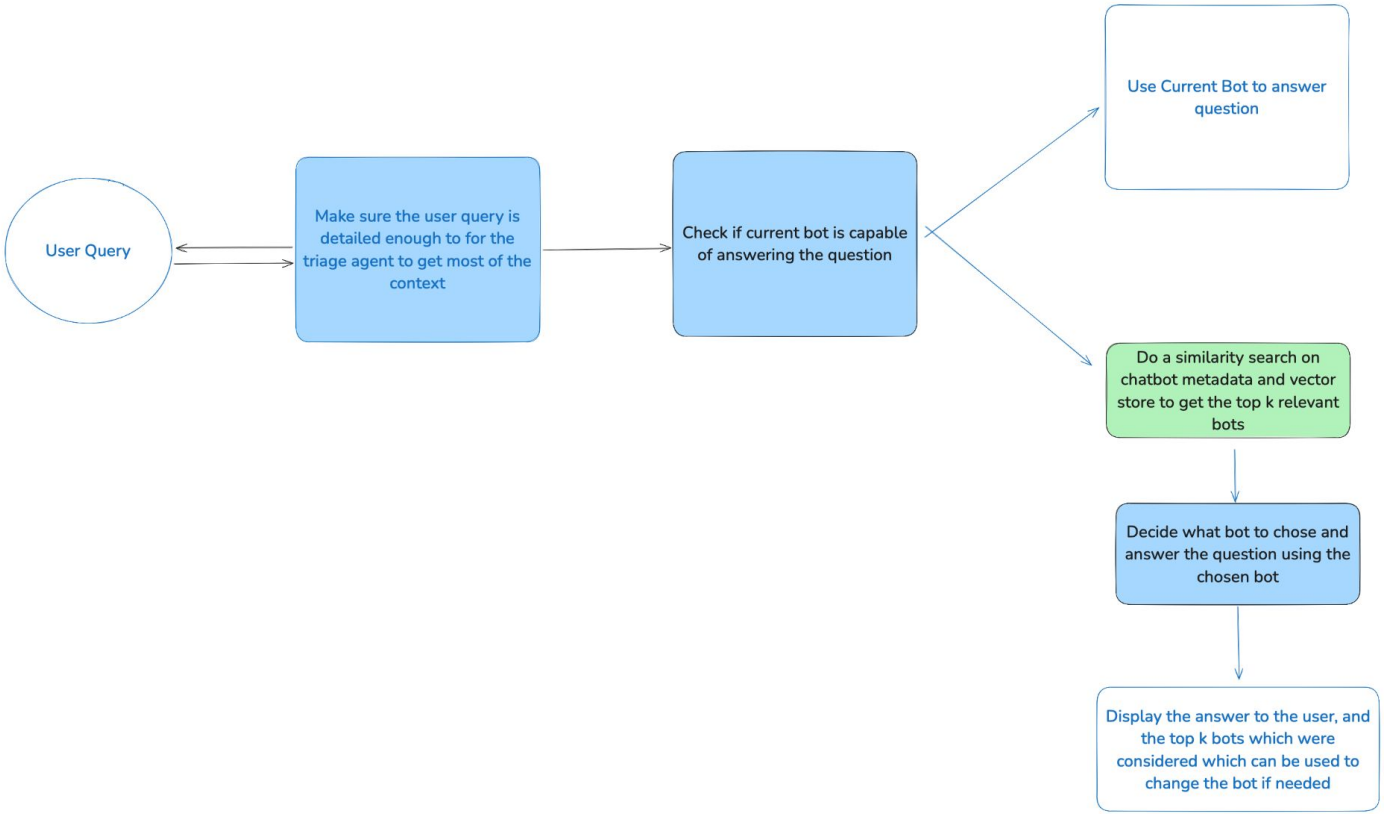
```python
# Example user query
user_query = "Can you provide insights on customer behavior across different product tiers?"
similarity_scores = query_agents(user_query, vector_databases, model)

# Print probability-like similarity scores for each agent
print("Similarity scores (as probabilities) for each LLM agent:")
for agent, score in similarity_scores.items():
    print(f"{agent}: {score:.2f}")
```

✓ 0.1s

```
Similarity scores (as probabilities) for each LLM agent:
customer_database_search: 0.36
internet_search: 0.34
organizational_information: 0.30
```

Triage Agent - WIP



Auto Metadata Generation

Goal: To give as input chatbot specific documents, and generate chatbot metadata on demand

Prompt sent to OpenAI API:

```
prompts = {
    "Capabilities": f"Based on the following combined document text, list the specific capabilities"
                    f" that a {bot_type} should have. Capabilities:",
    "Description": f"Summarize the purpose and scope of the following combined documents "
                   f"as they relate to a {bot_type}.Description:",
    "Specialization Keywords": f"Extract key phrases and terms from the following combined documents "
                               f"that would help identify them as related to a {bot_type}."
                               f"Specialization Keywords:"
```

Auto Metadata Generation

Results:

1. **Input**: 2 synthetic documents about employee benefits and organizational structure
2. **Output**:


```
  "Capabilities": "Based on the combined document text, the specific capabilities that a Customer Database Bot for Nexteer Automotive should have are:\n\n1. Working
    Hours Management\n   - Ability to track and manage employees' working hours, including standard hours, overtime, and flexible start times.\n\n2. Leave and
    Attendance Tracking\n   - Capability to monitor and manage various types of leave such as Paid Time Off (PTO), sick leave, parental leave, bereavement leave, and
    leave of absence.\n\n3. Remote Work Policy Enforcement\n   - Ability to enforce and regulate the company's hybrid work model, including eligibility criteria and
    adherence to IT security policies.\n\n4. Code of Conduct Compliance\n   - Feature to ensure employees adhere to Nexteer's core values and policies, with",

  "Description": "The combined documents from Nexteer Automotive consist of a Company Policy and Employee Benefits document and an Organizational Structure document.
    \n\n1. **Company Policy and Employee Benefits Document:**\n   - **Purpose:** This document outlines Nexteer Automotive's policies regarding working hours,
    attendance, remote work, code of conduct, and employee benefits such as health insurance, retirement plans, professional development, wellness programs, and
    assistance programs.\n   - **Scope:** It covers various aspects of employee engagement, work policies, benefits, and expectations within the organization,
    including details on working hours, leave policies, remote work guidelines, code of conduct, health insurance, retirement plans, professional development
    opportunities, wellness programs, and employee assistance programs. \n\n2. **Organizational Structure Document:",

  "Specialization Keywords": "- Customer Database Bot\n- Company Policy\n- Employee Benefits\n- Attendance Policy\n- Remote Work Policy\n- Code of Conduct\n- Health
    Insurance\n- Retirement Plans\n- Professional Development\n- Wellness Programs\n- Organizational Structure\n- Executive Leadership Team\n- Departmental Structure\n
    - Key Functions and Responsibilities\n- Reporting Structure"
}
```

Scoring System

- Detailed agent metadata for informed decision-making
- Performance tracking for continuous improvement
- Flexible scoring system for optimal agent selection
- Consideration of both immediate context and historical performance

Goals for Next Week

1. Build web based tool to upload “n” number of documents and generate metadata on demand.
2. Refine and optimize similarity search mechanisms, incorporating metadata to improve relevance and accuracy of results.
3. Implement better information gathering in triage agent and use the above similarity search to reduce latency

Deliverable

POC:

1. A model that understands user query domain and skills
2. Redirection logic/demo of redirecting user to specialized chatbots

Deliverable items:

1. Code (for testing model/redirection logic)
2. Documentation/Report

A little over a month left...

Schedule final presentation

Monday, December 9th – Friday, December 13th

Questions