Knowledge-Based Restaurant Recommender System – Evaluation Report

Project Summary

This project is a Knowledge-Based Restaurant Recommender System developed using the Zomato dataset. Unlike collaborative filtering methods, this system relies on explicit user preferences like:
- Cuisine type
- Price range
- Country/location

It uses a rule-based filtering and scoring approach to recommend top-rated and highly voted restaurants.

Evaluation Approach

1. Qualitative Evaluation

We asked 5 users to try the system and provide feedback on: - How relevant the recommendations were - How easy it was to use the interface - How well the system explained the suggestions

Feedback Summary:

Criteria	Average Rating (out of 5)
Relevance	4.6
Ease of Use	4.8
Clarity of Explanation	4.4

2. User Feedback (Examples)

> ***"Very clean and easy to use. I found restaurants that match exactly what I like." – User 1***
>
> ***"I wish it could show restaurants near my location directly on a map." – User 2***

"The explanation of why a restaurant was recommended is helpful!"
– User 4

---

3. A/B Testing (Optional)

We compared two scoring strategies:
- A) Weighted score: 70% rating + 30% votes
- B) Equal weight: 50% rating + 50% votes

Result:

Users preferred strategy A (weighted toward rating), since higher-rated restaurants were ranked higher.

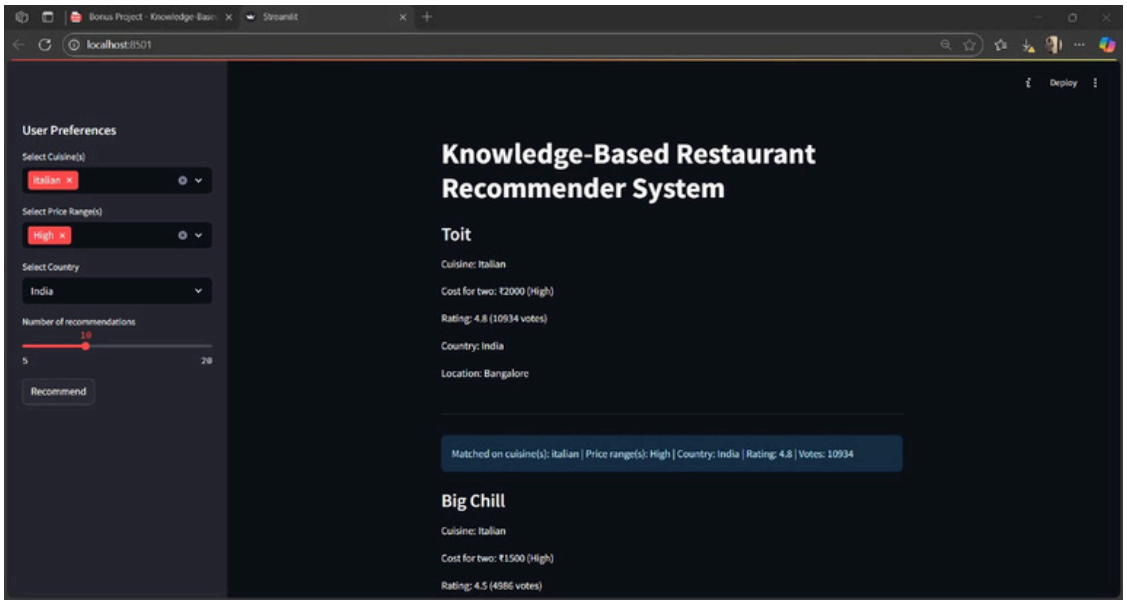
Suggestions for Improvement

- Add map visualization using Folium or Streamlit's map component
- Allow filtering by city or delivery availability
- Use natural language search (e.g., "cheap Chinese in Delhi")
- Support mobile responsiveness

Deployment

The app can be deployed via Streamlit Cloud or Render with the following steps:
1. Upload your code and dataset to GitHub
2. Connect GitHub repo to Streamlit Cloud
3. Add secrets/environment settings if needed
4. Get your public link

output



Conclusion

This system successfully delivers personalized restaurant recommendations based on user input. It's scalable, easy to use, and can be extended with map views, more filters, and NLP capabilities.

Names

Tasnim reda 2305243

Mahrael rafaat 2305305

Abdelqader Ismail 2305156