

Personalized Dining Recommendation Engine for



PROBLEM



Traditional Yelp recommendations fail to capture specific user preferences like “ambiance” or “good for a date”.

SOLUTION



Build AI recommendations based on user reviews to model user preferences and deliver more personalized restaurant recommendations.

BUSINESS VALUE

01 Improved Recommendation Relevance

02 Higher Platform Engagement

03 Better Business Discovery

USER EXPERIENCE

Enter prompt into chatbot



receive top 10 restaurant recommendations that incorporate user prompt and learned preferences for more personalized recommendations

Project Design Flow



Data Processing

Transform yelp JSON files containing businesses, users, and reviews into DataFrames.



Topic Modeling

Apply LDA to reviews to identify latent themes. Label each topic with human readable theme.



Feature Engineering

Generate contextual tags for each business and user. Compute cosine similarity scores to build candidate pool



Recommender System

Combine natural language query from user and known user profile to generate ranked recommendations.



User Interface

Build chat interface for user input. Display top 10 personalized recommendation with descriptions.

TOOLS USED:



Connect with us on [LinkedIn](#)



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