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Foodie.AI

YOUR NYC ULTIMATE GUIDE
FOR FOOD ADVENTURE

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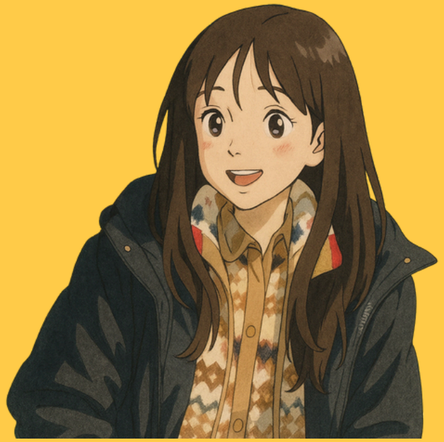
Team members



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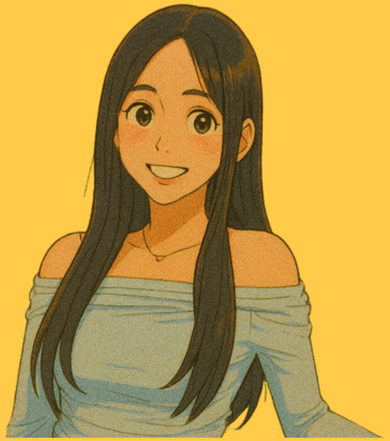

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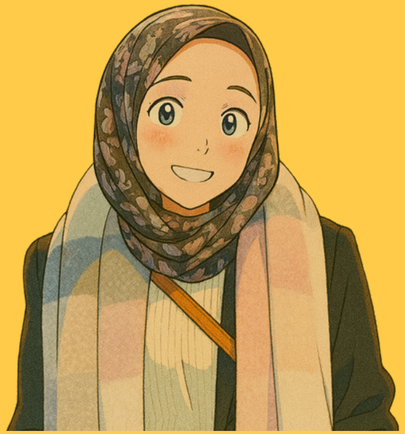

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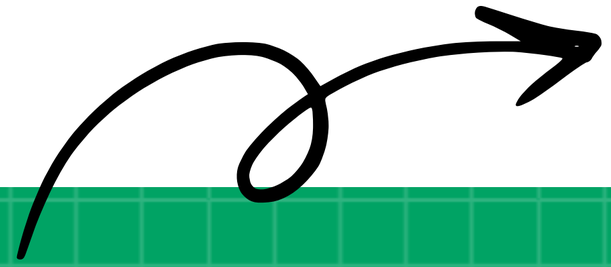
Content



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The Problem

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Persona

Mark (Age 26, NYC-Based)

- Lives in New York City and loves exploring new restaurants.
- Often hesitates to try new places because he's unsure if the taste will be good.
- Wants to filter options by specific dishes, not just broad cuisine types (e.g., "ramen," "truffle pasta," "mango sticky rice").
- Frustrated that platforms like Google Maps mostly show only cuisine categories (Asian, American, Italian) instead of dish-level options.
- Wants recommendations that match both his favorite dishes and the actual taste quality—based on trustworthy reviews, not popularity hype.
- Frequently searches for new food spots but struggles to make confident decisions.

"I want to eat spicy Thai crab meat curry in the Midtown"

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The problem?

Finding the right restaurant in Manhattan is overwhelming

- Thousands of options
- Review platforms show only the most popular places
- Hard to find hidden gems
- Searching for specific needs takes too long
- No platform combines personal taste + AI + safety data

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The Solution

Our Foodie.AI !

Foodie.AI is your smart NYC food guide. It reads your cravings, filters nearby options, and uncovers hidden gems you won't find on Google or Yelp.

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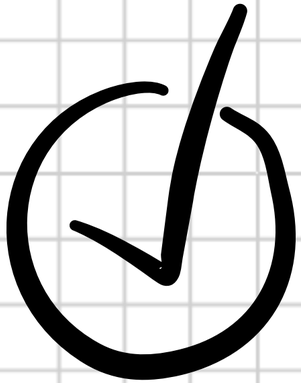
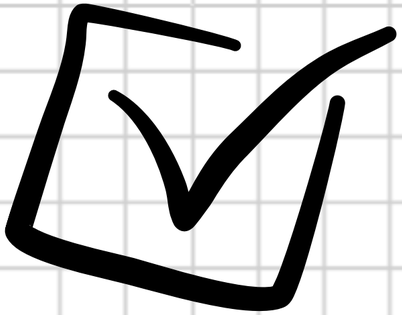
How user search?





1

Describe their craving

(Spicy ramen near Times Square)

2

Share location

(Auto locate or select area in Manhattan manually)

3

Foodie.AI processes the request

(Embeddings + ranking + filtering)

4

Display ranked restaurants

(Menus, Reviews, Address, and Descriptions)

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Our Product

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Foodie.AI

Your NYC Ultimate Guide for Food Adventure

Discover amazing restaurants in Manhattan with AI-powered recommendations

🍽 What are you craving?

Describe your food craving

E.g., spicy Thai crab curry, authentic Italian pasta, cozy coffee shop with WiFi...

Select Location

Harlem

OR

Location Set

Location found: Zipcode: 10027 | New York , New York , United States

✓ Automatically selected neighborhood: Harlem

Find My Perfect Restaurant

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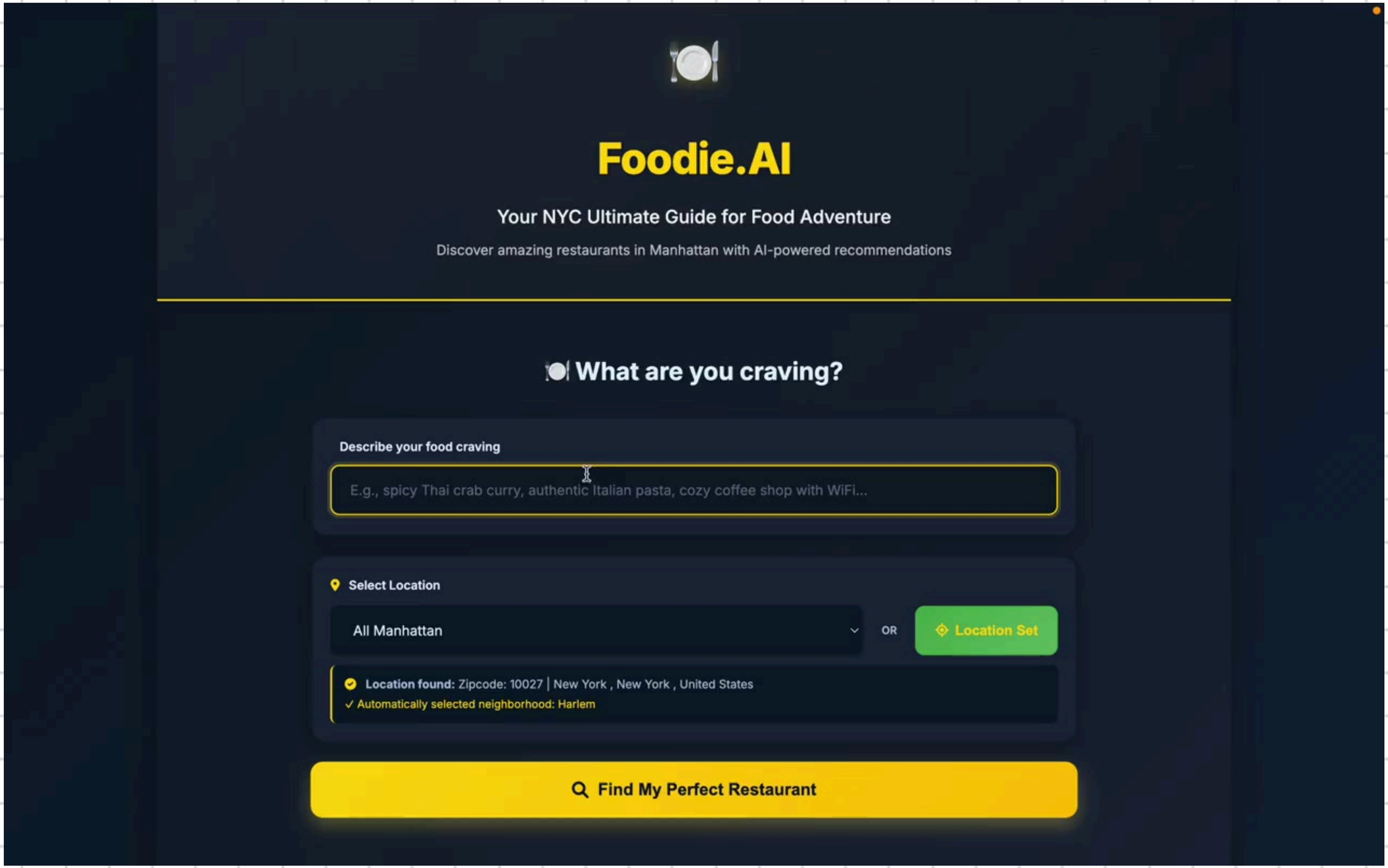

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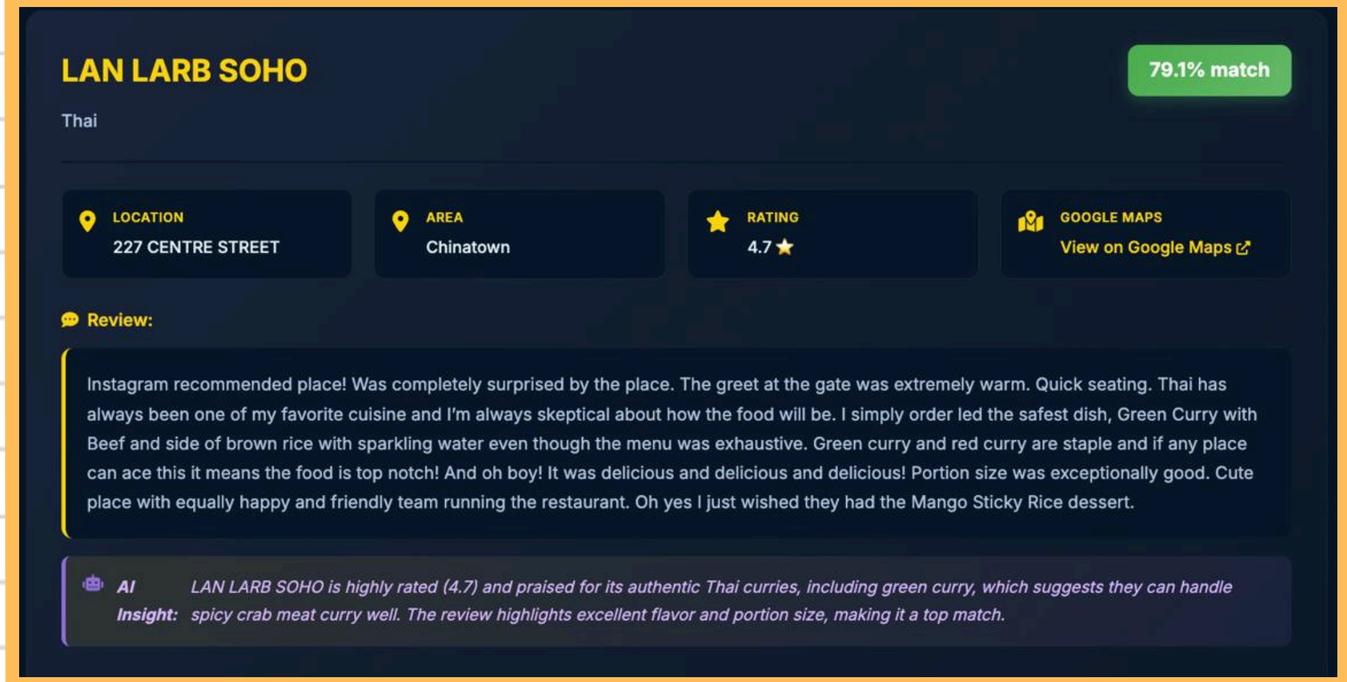
How Foodie.AI solve the pain point?



- **Personalizes restaurant choices** based on the user's exact craving, dish preference, and desired location.
- **AI Insight** transforms the user's craving and review data into a clear explanation of why this restaurant is a strong match.
- Displays key details at a glance: location, area, rating, and a direct Google Maps link.

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The Technical

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Technical Flow

1. Preprocessing Restaurant Data

1.1 Collect Restaurant Descriptions
Pull raw text descriptions of restaurants (menus, tags, reviews, categories, etc.).
Include metadata such as zipcode.

1.2 Generate Restaurant Embeddings
Use an embedding model to convert restaurant descriptions into vectors.
Store results in a structured table:

- Index
- Zipcode
- Embedded Vector

2. User Input Processing

2.1 User Provides Description
The user enters text describing what they want (e.g., “spicy ramen near Times Square”).

2.2 Convert User Input into Embedding
Embed the user’s query into the same vector space:
Example: (0.656, 0.875, 0.964, …)

2.3 Extract User Location
Use a ZIP code (e.g., 10018) or GPS to determine the user’s position.

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Technical Flow

3. Intelligent Filtering

Filter Restaurant Embeddings by User Zipcode

- Select only restaurants in matching (or nearby) zipcodes.
- Reduces search space to relevant local options.

4. Vector Similarity Search

4.1 Cosine Similarity Ranking

Compute cosine similarity between:

- User embedding
- Each restaurant embedding (after zipcode filtering)

4.2 Retrieve Top-K Candidates

Return the indices of the most relevant restaurants.

- Top-K: 364, 1024, 1036, 1124…

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Technical Flow

5. Post-processing with LLM

5.1 Fetch Restaurant Data

- Use the top-K indices to retrieve full restaurant descriptions.

5.2 LLM Re-ranking & Customization

- Send user description + top-K restaurant details to an LLM.
- LLM generates a personalized, more detailed recommendation,
  - Explanations
  - Comparisons
  - Dietary constraints
  - User preference matching

6. Final Output

Present Recommendations

System outputs an easy-to-read, user-friendly result:

- Ranked list
- Explanations
- Key features of each restaurant
- Additional suggestions if needed

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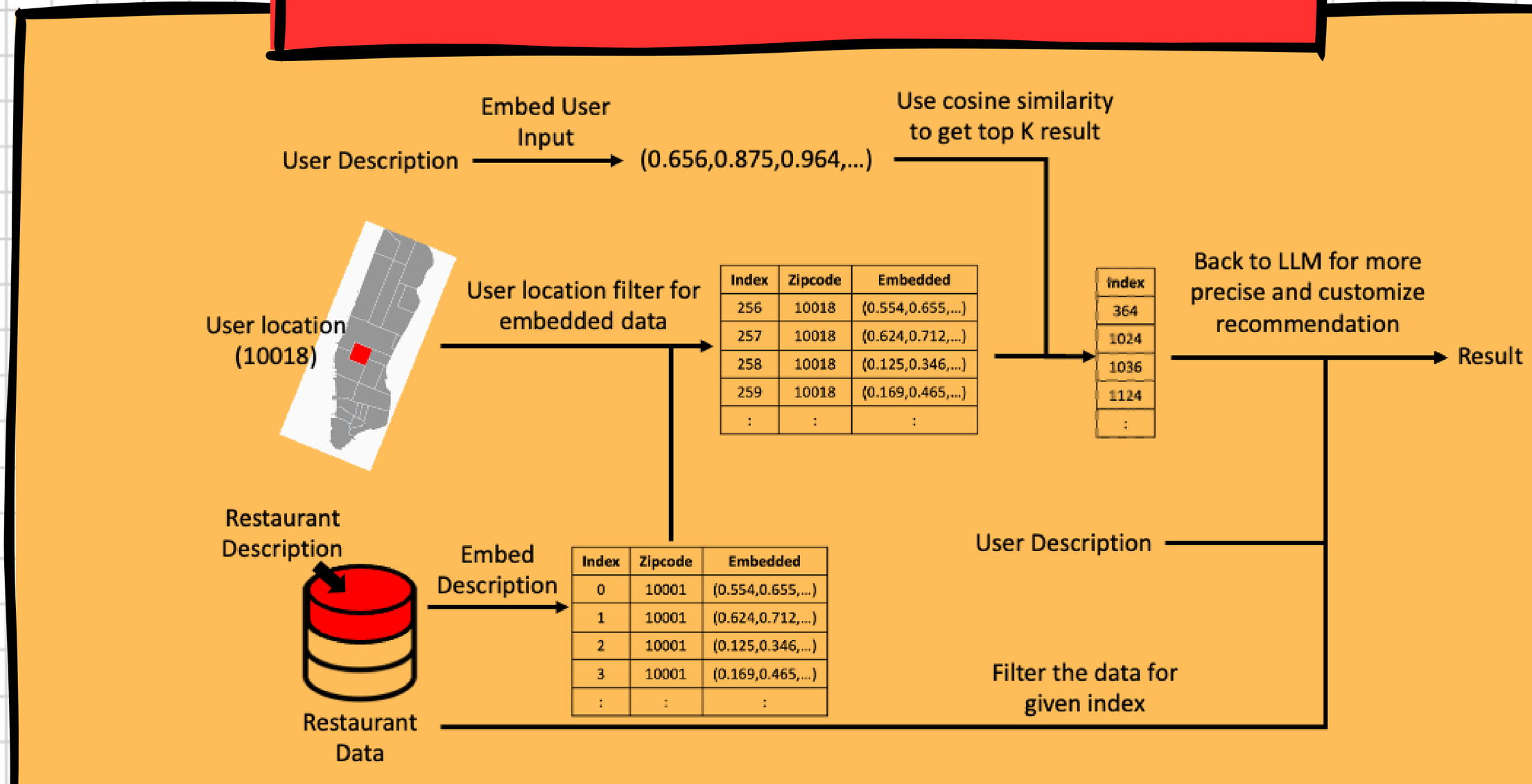
Overall Flow



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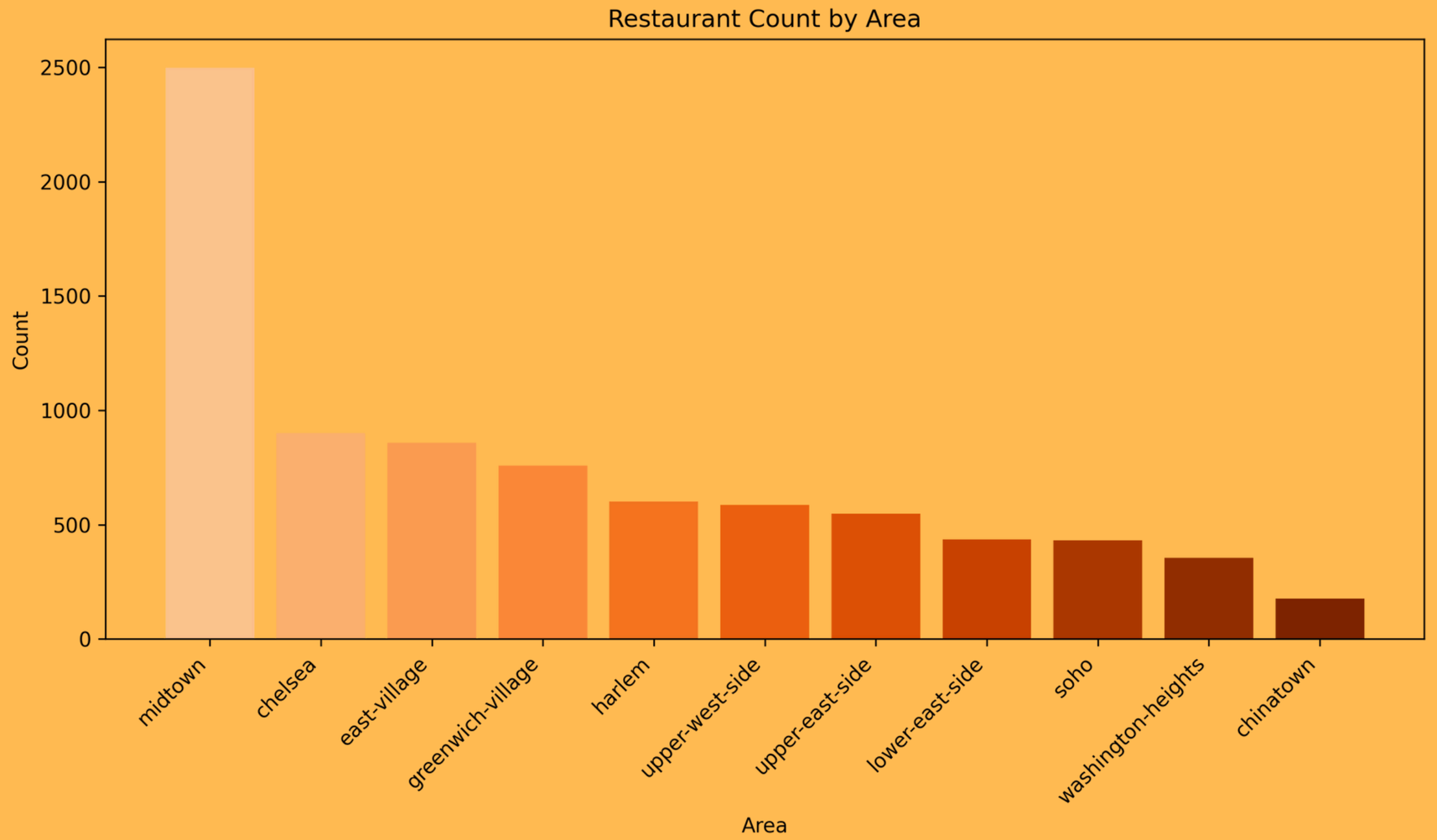
Data set

9k data



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Data set

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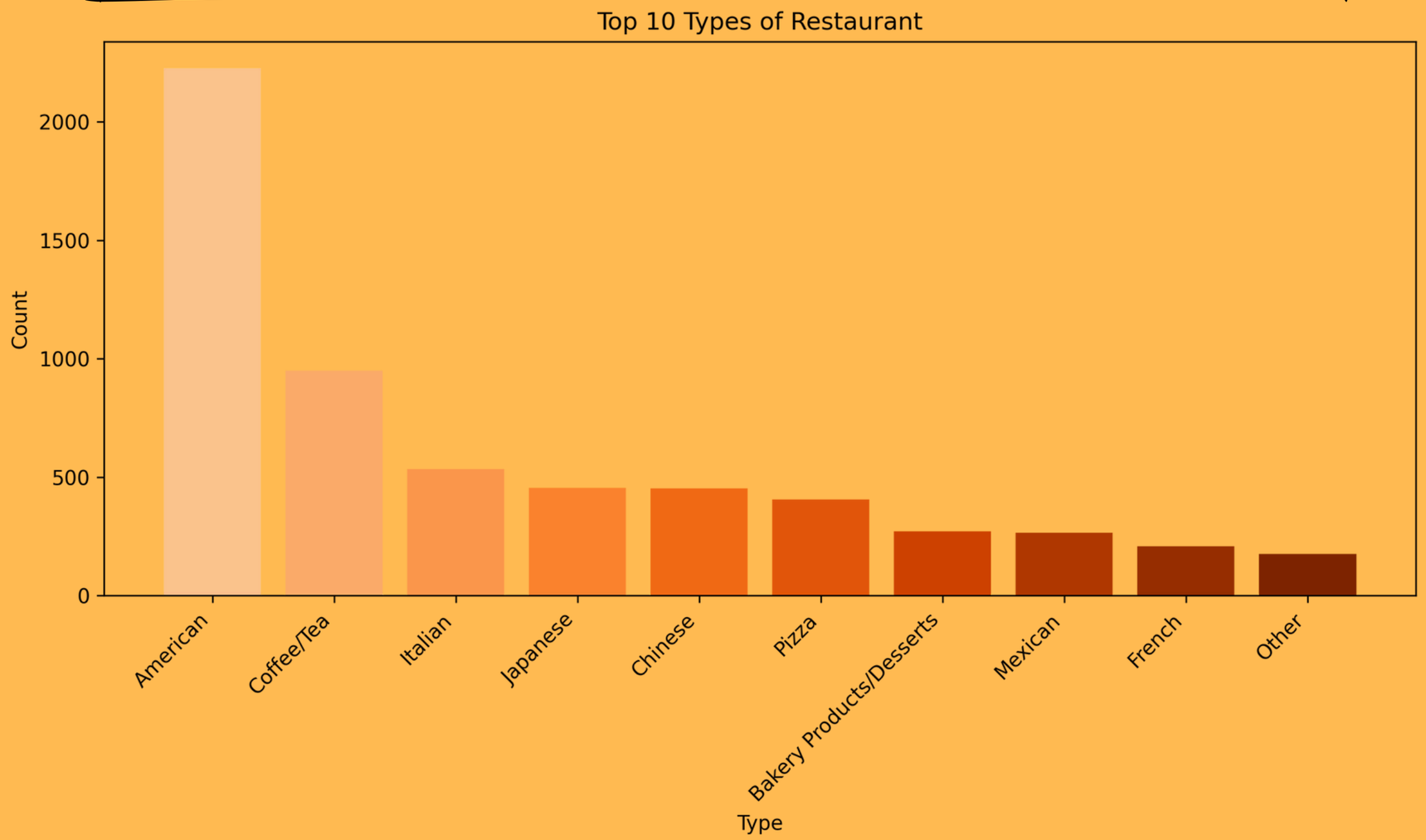

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Future Improvement

Future Improvement

Short Term

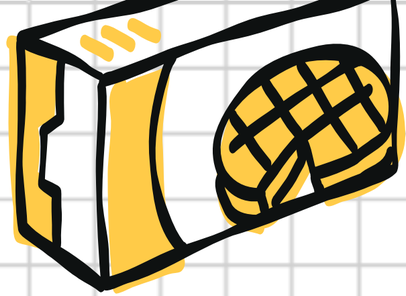
- Incorporate additional structured signals into the ranking function (eg. Price level, Waiting Time)
- Implement a learn-to-rank model that combines embedding similarity with these features, trained on aggregated user engagement data.
- Personalization and User Profiles by build user embeddings over time by tracking

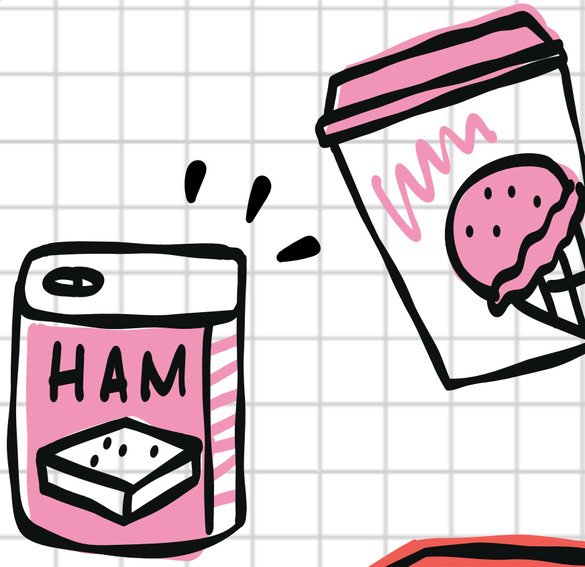
Medium Term

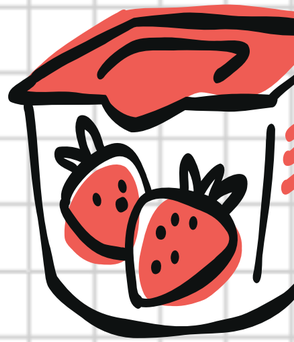
- Dish-Level and Menu-Item Embeddings : move from restaurant-level to dish-level semantic matching
- Better Explainability: Expand AI Insight with review evidence, attribute breakdowns, and confidence levels.

Long Term

- City Expansion: Scale beyond Manhattan to other boroughs, U.S. cities, and international markets.
- Multi-Modal AI: Use food photos, menu images, and video reviews for richer embeddings.
- Community Features: Social discovery, curated lists, influencer picks, and trusted reviewer rankings.







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Questions?

Thank you for Listening