

# Uncovering Hot & Trending Restaurants

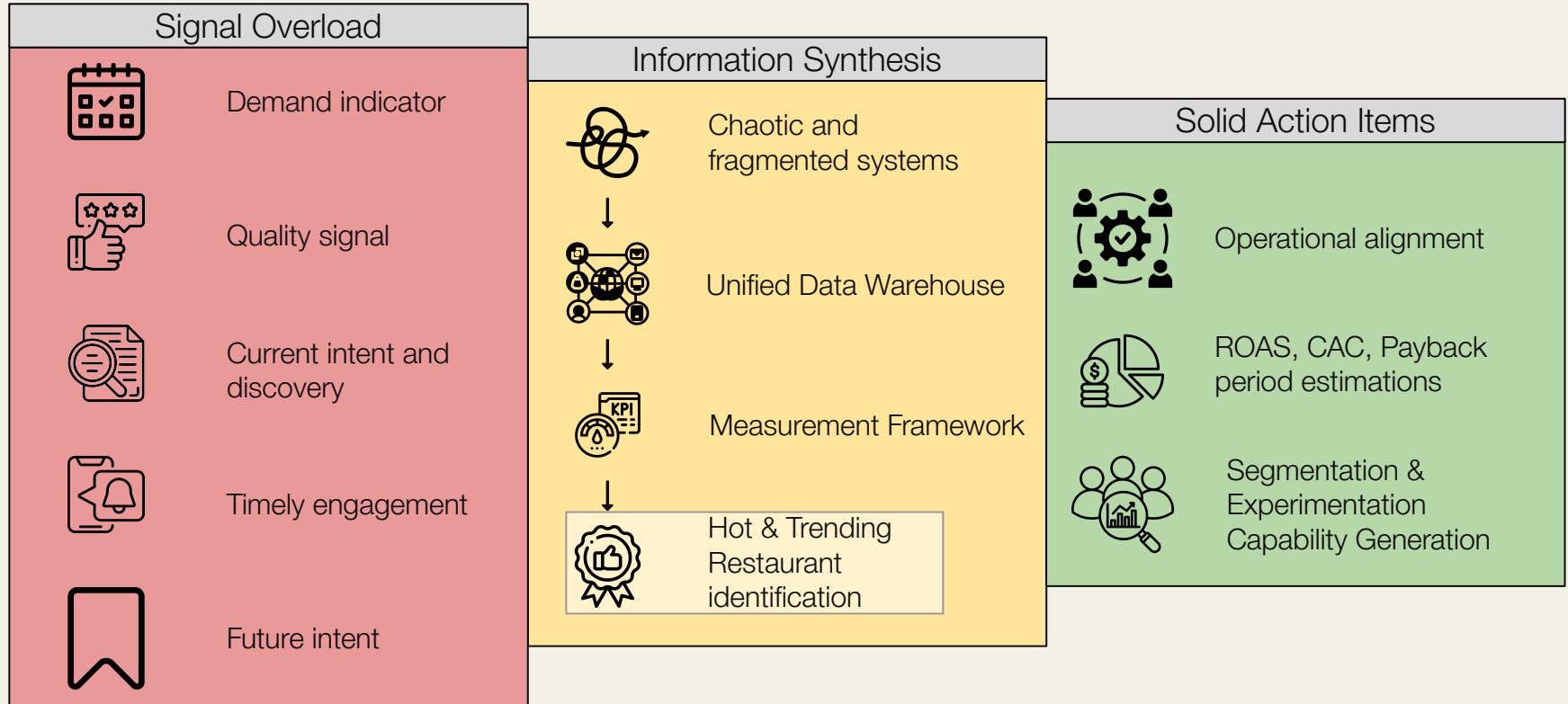
Advait Ramesh Iyer



## **Table of Contents**

- Business challenge and context: why “hot & trending” matters?
- Market and Metric Trends
- Defining “Hot & Trending”: Core Methodology
- Restaurant Tier Classification
- Hot & Trending Restaurants
- C1 Profile and Recommendation
- C2 Profile and Recommendation
- Model Validation and Reliability
- Limitations & Opportunities

# Business challenge and context: why “hot & trending” matters?



# Market and Metric Trends

## City C1

- More restaurants [2253 (85%)]
- Competitive\*, focus on reservation and discovery
- Signal importance:
  - Reservations (45%)
  - Searches (25%)
  - Reviews (15%)
  - Alerts (10%)
  - Saves (5%)

Metric (Baseline**)	Avg.
# Reservations	315
# Reviews	13
# Searches	169
# Alerts	11
# Saves	7

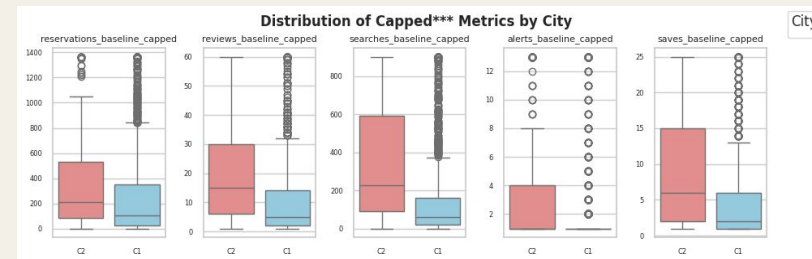
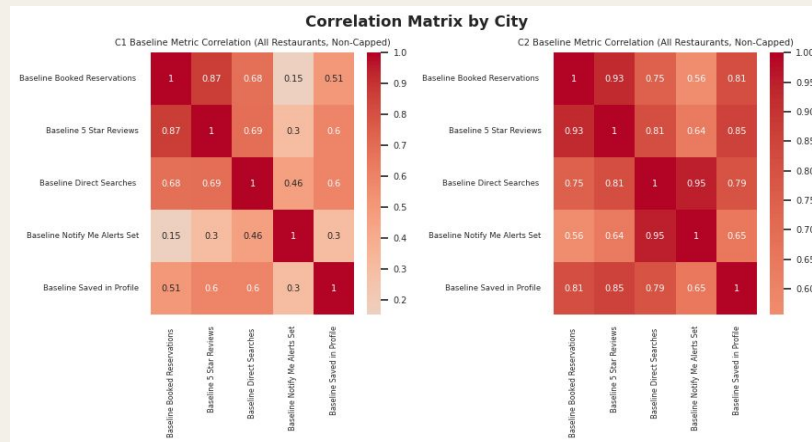
## City C2

- Less restaurants [389 (15%)]
- Boutique\*, focus on reservation and reputation
- Signal importance:
  - Reservations (35%)
  - Searches (20%)
  - Reviews (25%)
  - Alerts (15%)
  - Saves (5%)

Metric (Baseline**)	Avg.
# Reservations	425
# Reviews	27
# Searches	629
# Alerts	69
# Saves	14

## Assumptions:

- \* C1 and C2 have 100% coverage by OpenTable
- \*\* Baseline time period is comparable to last 30 days
- \*\*\* Capped: Outliers (>95th percentile) are removed



# Defining “Hot & Trending”: Core Methodology

## Pre-processing

## Growth Calculation

## Scoring

## Tier Breakdown

## Validation

### 1. Summary:

Quartiles, Variance, Counts

### 2. Outlier Exclusion:

Excluded >95th percentile to cap variables

### 3. Engagement Metrics:

Alerts, Saves

### 4. Core Metrics:

Reservations, Reviews, Searches

### 5. Effective Baseline:

MAX(restaurant baseline, city 10th percentile)

### 6. Growth Rate: (Last 30 Day

- Baseline) / (Baseline)  
Capped at -80% to +300%

### 7. Growth Dampening:

Restaurant growth rate scaled by baseline size

### 8. Market-specific

weightage:  
Assigned weights based on signal importance

### 9. Composite Score:

SUMPRODUCT(  
Metric weight x Adjusted growth rate)

### 10. Momentum

Consistency:  
Restaurants trending positive on  $\geq 3$  metrics to be rewarded

### 11. City level Z-score:

Calculating Z-score on city level distribution  
This is the final trending score

### 12. City Ranking

Dense Rank by Final trending score in the city

### 13. Shortlist top 15 per city

### 14. Defining restaurant tiers

Tier 1 (rank 1-3): Strong trending scores

Tier 2 (rank 4-8): Good trending scores

Tier 3 (rank 9-15): Positive trending scores

### 15. Statistical Validation

Tier 1 reservation growth > 20%  
(statistically significant for 83% restaurants)

### 16. Business Logic Validation

- Very high scores to be flagged  
- High score but declining reservation growth to be flagged

### 17. Tiered data summary

Quartiles, Counts

# Restaurant Tier Classification

Tier	Rank Cutoff	Tier Description	Business Action	Detailed Recommendations
Tier 1 - Feature Prominently	Rank 1-3	Top 3 trending restaurants	High-visibility promotion (homepage, social)	<ul style="list-style-type: none"><li>- Spotlight in social media stories</li><li>- Enable exclusive partnerships &amp; limited-time offers</li></ul>
Tier 2 - Include in Campaigns	Rank 4-8	Next 5 top restaurants by trending score	Include in seasonal email or loyalty campaigns	<ul style="list-style-type: none"><li>- Leverage in paid digital advertising for target geos</li><li>- Feature in "Local Favorites" newsletters</li></ul>
Tier 3 - Monitor for Future	Rank 9-15	Rising stars showing consistent upward trend	Track for growth, test light promotions	<ul style="list-style-type: none"><li>- Encourage participation in local events or menu upgrades</li><li>- Use as test group for new product features</li><li>- Reassess for promotion if momentum increases</li></ul>

# Hot & Trending Restaurants

<u>City C1</u>			
City Rank	Restaurant ID	Composite Score	Final Score
1	2944620	1.6	3.5
2	3304350	1.6	3.4
3	857770	1.4	3.0
4	3536910	1.2	2.6
5	1386900	1.2	2.5
6	3308580	1.1	2.3
7	3650130	1.1	2.3
8	2682510	1.1	2.3
9	3638580	1.1	2.2
10	1038780	1.0	2.1
11	3534810	0.9	1.9
12	3380730	0.9	1.8
13	3384480	0.9	1.8
14	710620	0.9	1.8
15	3534780	0.7	1.5

<u>City C2</u>			
City Rank	Restaurant ID	Composite Score	Final Score
1	10182040	1.5	20.2
2	12665537128	0.8	9.7
3	13728949306	0.7	9.1
4	13215100	0.7	9.1
5	1098430	0.7	9.0
6	2540838019	0.7	8.7
7	10392940	0.6	7.1
8	27760	0.5	6.8
9	2145709207	0.5	6.6
10	58800	0.5	6.5
11	11086420	0.5	6.5
12	1458460	0.5	6.1
13	1923435544	0.5	5.8
14	3499420	0.4	5.6
15	13333600	0.4	5.2

# C1 Profile and Recommendation

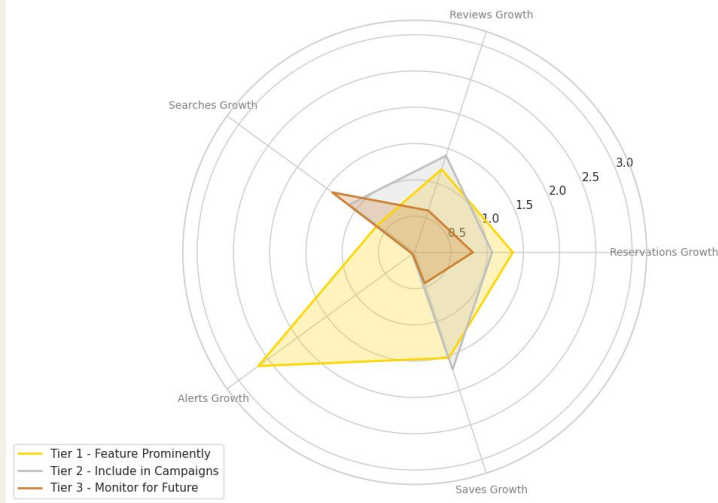
- Relies on direct booking behavior (reservations) and discovery intent (searches)
- User acts more on intent-to-book rather than engagement behaviors like reviewing or saving restaurants
- Market competition likely high in the city

- Prioritize Tier 1 restaurants for homepage & spotlight features
- Invest in conversion campaigns for Tier 2 to accelerate growth
- Monitor Tier 3, especially those showing Search or Saves growth

## C1 across Tiers

- **Tier 1** restaurants show **balanced, well-rounded growth**, particularly in Reservations, Alerts, and Saves, signaling strong overall momentum.
- **Tier 2** restaurants are also **growing across key areas** but with less intensity, especially in Searches and Reviews.
- **Tier 3** restaurants have inconsistent growth, **showing early signs of trending** but lacking widespread performance across metrics.

Average Adjusted Growth Profile for Top 30 Restaurants in C1 by Tier





# C2 Profile and Recommendation

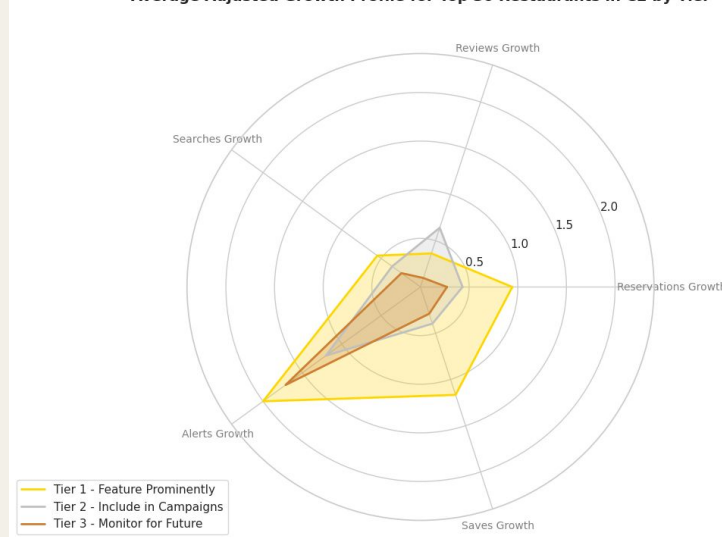
- Balanced engagement pattern
- Users consider social proof (reviews) and interest signals (alerts/searches) while making dining decisions
- Consumers are likely influenced by others' opinions and personalized notifications
- The market is smaller, and shares attributes of a touristy destination

## C2 across Tiers

- **Alerts** are high across tiers, suggesting high dine-in intent
- **Tier 1** restaurants display high **user interest** and **engagement**
- **Tier 2** restaurants show **healthy upward trends** in Reviews and Alerts
- **Tier 3** restaurants are **emerging players** with modest or uneven performance, similar to C1's Tier 3 but in a more boutique market

- Use discovery campaigns to drive differentiation between Tiers
- Consider refining tier logic based on limited signal separation
- Promote Tier 1 in editorial features, but use test-and-learn for Tier 2/3

Average Adjusted Growth Profile for Top 30 Restaurants in C2 by Tier



# Model Validation and Reliability

- Minimum +20% change to be significant
- Flag restaurants with city-level baselines > 95th percentile, or < 10th percentile and validate behavior
- Warn if trending restaurants are declining (reservation growth < -10%)

## **Statistical validation:**

validate if the increase in reservation is statistically significant

- Compare recent reservation trend with baseline
- Flag if the change from baseline is not significant (<20% lift)

## **Business alignment:**

heuristic and business value

- Flag restaurants with mixed signals - high score but negative reservation growth
- Check for city imbalance

## **Data completeness:**

overall completeness and consistency of the results

- Core metric (reservations, reviews, searches)
- Engagement metric data reliability (push notifications, saves)
- Null imputations

# Limitations and Opportunities

Current Limitations	Future Improvements
Baseline needs to be vetted	<ul style="list-style-type: none"><li>• Baseline length to be optimised for stability</li><li>• Treat for halo effect of other campaigns</li></ul>
Predictability lacking (high multicollinearity)	<ul style="list-style-type: none"><li>• Enrichment based on customer behavior, seasonality, competitor behavior and journey stitching</li></ul>
No real-time updates	<ul style="list-style-type: none"><li>• Automated pipelines for real-time captures</li><li>• Customer journey logic enhancement</li></ul>
Seasonality	<ul style="list-style-type: none"><li>• Cohorts of holiday/festival time data to be evaluated separately from non-special events</li></ul>
Competitor landscape	<ul style="list-style-type: none"><li>• Competitive index of OpenTable vs. others</li><li>• Evaluation of local TAM, and saturation</li></ul>
Qualitative insights missing	<ul style="list-style-type: none"><li>• NLP/sentiment analysis of reviews to understand nuanced pain-points</li></ul>
Customer & geographic socio-demographic profiles	<ul style="list-style-type: none"><li>• Area/neighborhood demographic data profiles</li><li>• Customer segments with intent estimations</li></ul>
Visual and social signals	<ul style="list-style-type: none"><li>• Incorporate visual messaging theme elements</li><li>• Social Media sentiment and share-of-voice</li></ul>