

Authenticity:
Predictors and Effects on Consumer Ratings
Hazel, Emily, Yulun, Koichi

Background

- Rising importance of authenticity for consumers decision making has been widely recognized in advanced economies. Kovács et al. (2014) found a positive correlation between authenticity in restaurant reviews and customer ratings in Los Angeles, New York, and Dallas.

➔ We would like to see if consumers' evaluation of authenticity correlates to their ratings on restaurants in Chicago and if other geo-cultural features would influence the ratings

Goal

- Investigate relationships between authenticity and rating of restaurants in Chicago
 - “Authenticity” is measured at consumer reviews of each restaurant, utilizing an authenticity score table.
- Evaluate how those relationships would be influenced by geo-cultural features of restaurants (e.g., whether a restaurant is located cultural neighborhoods, like Chinatown, Little Italy)
- Compare and see if the relationships would differ depending on online restaurant review platforms

Measuring Authenticity

Table 1 Authenticity Scores Assigned to Keywords

Keyword	Score	Keyword	Score	Keyword	Score	Keyword	Score
Authentic	95	Truthful ^a	68	Usual	53	Bogus	13
Genuine	92	Unmistakable ^a	68	Decent ^a	51	Forgery	13
Real	88	Artisan ^a	67	Unusual	51	Fake	12
Skilled ^a	83	Unpretentious ^a	67	Caring ^a	49	Hoax	11
Faithful	81	Heartful ^a	66	Ambitious ^a	48	Cheat	10
Legitimate ^a	81	Delicious	65	Replica ^a	46	Dishonest	10
Original ^a	80	Virtuous	64	Offbeat	43	Feigned	10
Traditional	79	Normal ^a	63	Atypical	41	Ersatz	9
Pure	78	Creative ^a	62	Unassuming ^a	37	Faked	9
Historical ^a	77	Interesting ^a	62	Invented	36	Imitation	9
Sincere	77	Orthodox ^a	62	New ^a	36	Quack	9
Master chef	75	Artful ^a	60	Unconventional	36	Unreal	8
Craftsmanship	74	Special ^a	60	Peculiar	35	Humbug	7
Honest ^a	74	Righteous	58	Outlandish	32	Impostor	7
Integrity ^a	74	Substantial ^a	57	Assumed	30	Sham	7
Quintessential	74	Authoritative	56	Idiosyncratic	30	Unauthentic	7
Expert	73	Typical	56	Quirky	29	Deceptive	6
Iconic ^a	73	Awesome ^a	55	Extroverted ^a	28	Inauthentic	6
Inspiring ^a	73	Moral	55	Modern	27	False	6
Unique ^a	72	Eccentric	54	Unorthodox ^a	27	Phony	5
Wholesome	72	Ethical ^a	54	Pretentious	19	Scam	4
Professional	70	Fresh ^a	53	Untraditional ^a	17		
Skillful	70	Old-fashioned ^a	53	Artificial	14		

- Restaurant Review Sites

	TripAdvisor	Zomato
Sample size	673	501
Advantages	One of the biggest rating website	Rating website only for restaurants
Limits	More non-local customers	Contains fewer information

Chicago Hotels Things to do Restaurants Flights Vacation Rentals Vacation Packages Cruises Rental Cars ***

United States > Illinois (IL) > Chicago > Chicago Restaurants > MingHin Cuisine

MingHin Cuisine Claimed

443 reviews #180 of 5,600 Restaurants in Chicago \$ - \$\$ Chinese, Asian, Cantonese

2168 S Archer Ave, Chicago, IL 60616-1514
+1 312-808-1999
[Website](#)
[Menu](#)
Open now: 10:00 AM - 12:00 AM

Get food delivered **GRUBHUB**

Order online

All photos (284)

Ratings and reviews

4.0 443 reviews

#4 of 242 Chinese in Chicago

Pricing details

PRICE RANGE
\$10 - \$18

Location and contact

Map view

zomato

☒ Chicago
 Search for restaurant, cuisine or a dish
 Log in Sign up

Home / United States / Chicago / Center / West Loop / Carnivale

Carnivale

Cuban, Mexican, Latin American

West Loop, Chicago

11:30am – 10pm (Today)

Add Review
Direction
Bookmark
Share

Overview Reviews Photos Menu

4.2 • 377 Reviews

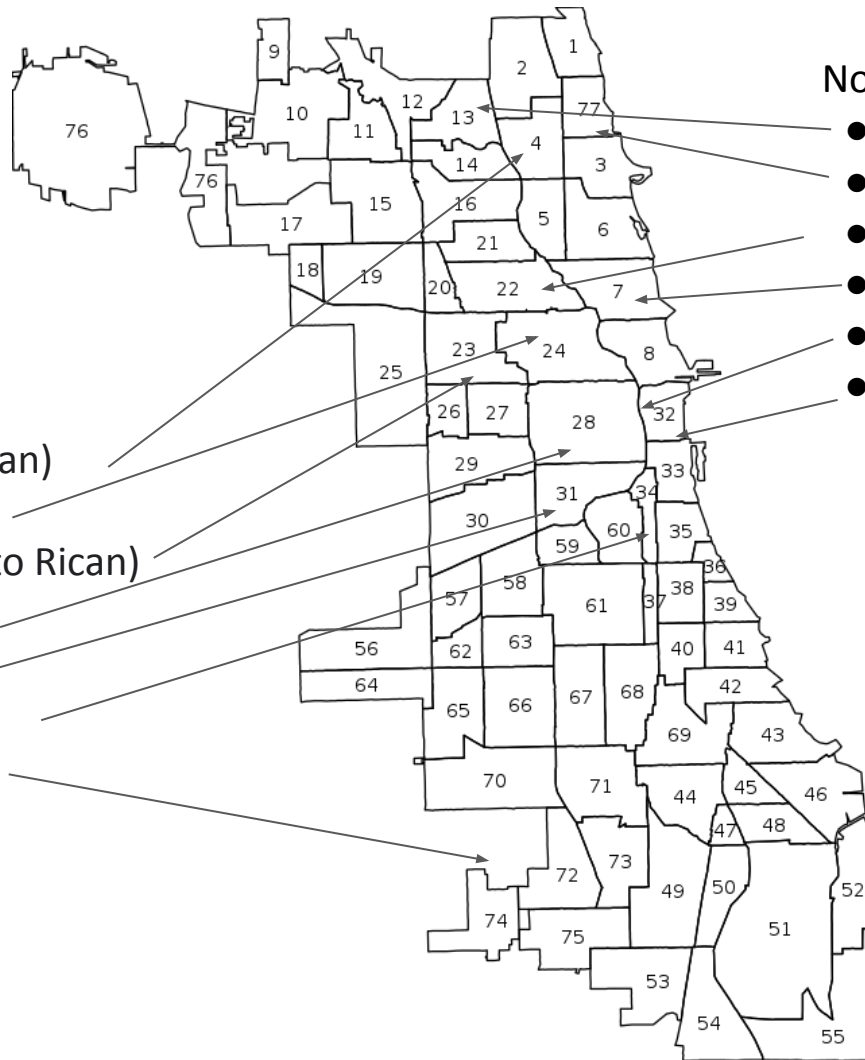
Neighborhoods

Cultural Neighborhoods:

- Lincoln Square (German)
- West Town (Polish)
- Humboldt Park (Puerto Rican)
- Little Italy (Italian)
- Pilsen (Mexican)
- Chinatown (Chinese)
- Bridge View (Arab)

Non-cultural Neighborhoods

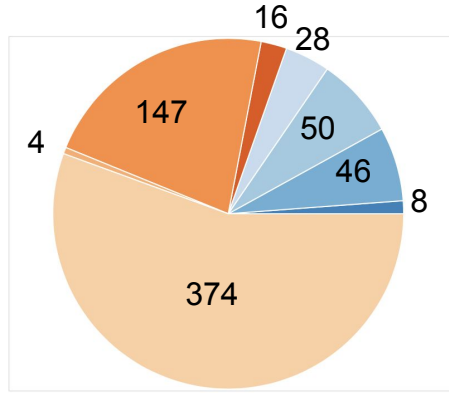
- North Park
- Andersonville
- DePaul
- Lincoln Park
- West Loop
- South Loop



Data collection & cleaning

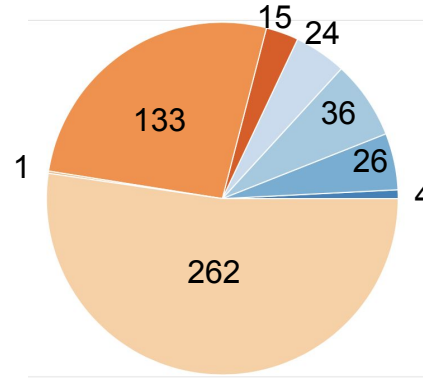
- Scraping
 - Dynamic website: Selenium
 - Elements are correct, but the scraper returns nothing
 - The importance of `time.sleep()`
 - Switch between pages and stop at the last page
- Cleaning
 - Think carefully about variable normalization: review lengths and review counts (measuring authenticity score and combining two different datasets)
 - Simplify dataset (drop unused columns)

Trip Advisor: 673 restaurants



- Bridge View (Arab)
- Chinatown (Chinese)
- Lincoln Square (German)
- Little Italy (Italian)
- Pilsen (Mexican)
- West Town (Polish)
- Humboldt Park (Puerto Rican)
- Other

Zomato: 501 restaurants



- Bridge View (Arab)
- Chinatown (Chinese)
- Lincoln Square (German)
- Little Italy (Italian)
- Pilsen (Mexican)
- West Town (Polish)
- Humboldt Park (Puerto Rican)
- Other

Results (TripAdvisor)

1. Authenticity score & Average rating not significant
2. Located in a cultural neighborhood → Higher average rating

	avg_rating I	avg_rating II	avg_rating III	avg_rating IIII
authenticity_score	0.0009 (0.0018)	0.0011 (0.0018)	0.0006 (0.0018)	0.0006 (0.0019)
micelin		0.1427*** (0.0480)	0.1294*** (0.0483)	0.1296*** (0.0484)
price_class_2.5		-0.0269 (0.0313)	-0.0244 (0.0312)	-0.0246 (0.0313)
price_class_4.0		0.0677 (0.0704)	0.0805 (0.0705)	0.0800 (0.0707)
review_count		0.0001 (0.0001)	0.0001 (0.0001)	0.0001 (0.0001)
is_cul_neighborhood			0.0547** (0.0264)	0.0558** (0.0278)
is_match_culture				-0.0060 (0.0493)
const	3.8955*** (0.1113)	3.8808*** (0.1180)	3.8876*** (0.1178)	3.8852*** (0.1195)
R-squared	0.0004	0.0247	0.0310	0.0310
R-squared Adj.	-0.0011	0.0174	0.0223	0.0208

Standard errors in parentheses.

* p<.1, ** p<.05, ***p<.01

Results (TripAdvisor)

1. Higher authenticity score → Higher food rating
2. Located in a cultural neighborhood → Higher food rating

	food_rating I	food_rating II	food_rating III	food_rating IIII
authenticity_score	0.0094*** (0.0029)	0.0076*** (0.0029)	0.0057* (0.0030)	0.0062** (0.0030)
michelin		0.0011 (0.0685)	-0.0294 (0.0687)	-0.0286 (0.0687)
price_class_2.5		-0.1568*** (0.0495)	-0.1508*** (0.0491)	-0.1519*** (0.0491)
price_class_4.0		-0.3129*** (0.1044)	-0.2879*** (0.1038)	-0.2941*** (0.1038)
review_count		0.0000 (0.0001)	0.0001 (0.0001)	0.0001 (0.0001)
is_cul_neighborhood			0.1029*** (0.0369)	0.1166*** (0.0386)
is_match_culture				-0.0805 (0.0667)
const	3.5342*** (0.1815)	3.7816*** (0.1923)	3.8411*** (0.1916)	3.8099*** (0.1932)
R-squared	0.0292	0.0680	0.0887	0.0926
R-squared Adj.	0.0264	0.0544	0.0727	0.0739

Standard errors in parentheses.

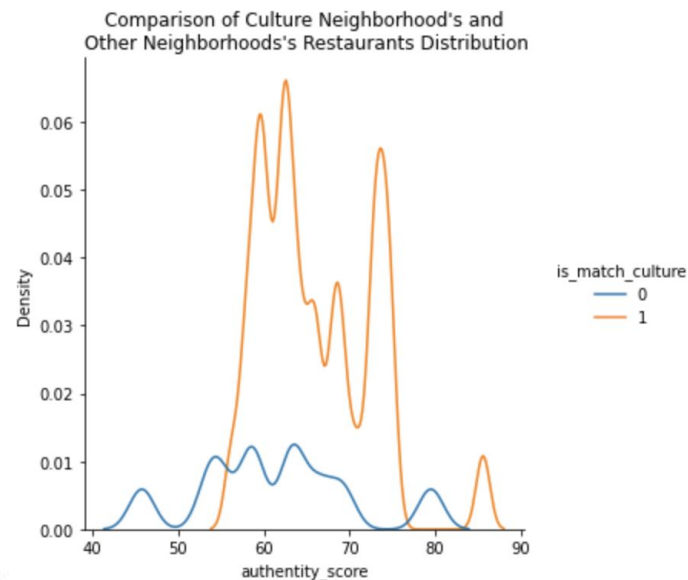
* p<.1, ** p<.05, ***p<.01

Results (TripAdvisor)

1. Located in a cultural neighborhood → Higher authenticity score
2. Cultural match (neighborhood & cuisine type) → Higher authenticity score

	authenticity_score I	authenticity_score II	authenticity_score III
avg_rating	0.5120 (0.8212)	0.2491 (0.8155)	0.2587 (0.8020)
michelin	-0.5713 (1.0250)	-1.0444 (1.0215)	-1.1875 (1.0050)
price_class_2.5	-2.7527*** (0.6551)	-2.6002*** (0.6494)	-2.3648*** (0.6405)
price_class_4.0	-5.1917*** (1.4820)	-4.5597*** (1.4755)	-4.0170*** (1.4553)
review_count	0.0055** (0.0025)	0.0069*** (0.0025)	0.0064** (0.0025)
is_cul_neighborhood		2.1418*** (0.5505)	1.2139** (0.5741)
is_match_culture			4.8667*** (1.0010)
const	60.9781*** (3.2950)	60.8652*** (3.2608)	60.6759*** (3.2070)
R-squared	0.0373	0.0587	0.0910
R-squared Adj.	0.0301	0.0502	0.0815

Standard errors in parentheses.



Results (Zomato)

1. Higher authenticity score → Higher average rating

	avg_rating I	avg_rating II	avg_rating III	avg_rating IIII
authenticity_score	0.0043*** (0.0008)	0.0025*** (0.0007)	0.0025*** (0.0007)	0.0025*** (0.0007)
avgerage_cost		0.0018** (0.0009)	0.0020** (0.0009)	0.0020** (0.0009)
review_count		0.0031*** (0.0002)	0.0031*** (0.0002)	0.0031*** (0.0002)
is_cul_neighborhood			0.0545 (0.0353)	0.0542 (0.0371)
is_match_culture				0.0018 (0.0674)
const	3.4795*** (0.0439)	3.3789*** (0.0421)	3.3502*** (0.0460)	3.3502*** (0.0460)
R-squared	0.0557	0.3057	0.3090	0.3090
R-squared Adj.	0.0538	0.3015	0.3034	0.3020

Standard errors in parentheses.

* p<.1, ** p<.05, ***p<.01

Further Discussion

- Increase sample size
- Add more authenticity measurements (e.g., self-representation in menus or description, family-owned/ franchise) to see overall tendencies and which factor correlates with which customer values
- Another way to add measurement of customer evaluation is to add comparative sales/revenue in each neighborhood
- Also, cultural distance could be added as another feature (the authenticity might be captured at different degrees. e.g. Eastern cuisines are conceived as more authentic than Western ones)