

Summary Statistics I












UNIVERSITY OF MINNESOTA

The Story of Zagat



 UNIVERSITY OF MINNESOTA

The Zagat Guide ...

	hail the new chef – Michael Anthony, formerly of Blue Hill at St. Barns – and salute his “spellbinding” market-centric cuisine
	Gary Danko  San Francisco American “Gary Swanko” “fully merits its superb reputation” gush “flush” “ies” who vote the “celebrity” chef-owner’s “sleek” New American “temple of gastronomy” in Fisherman’s Wharf No. 1 Food Decor Service Cost 29 26 28 \$104
	Charlie Trotter’s  Chicago American “A religious experience” “worth a mortgage payment” awaits at Lincoln Parker, the “epitome of [New] American gastronomy” and Chicagoland’s Most Popular restaurant, where customers Food Decor Service Cost 27 25 27 VE
	Babbo  New York Italian “When it’s this good” “it’s not hype” is still the consensus as Ma Batali and Joe Bastianich celebrate the 10th anniversary of the “fabulously popular” Village flagship that’s voted NYC’s No. 1 ... Food Decor Service Cost 27 25 27 \$76
	Spago  Los Angeles Californian “Forget Gibraltar, this place is the rock of Los Angeles” sum up Food Decor Service Cost 27 25 25 \$73

Computing The Scores

- What should they mean?
 - Popularity
 - Average Rating
 - Probability of You Liking
- How to compute?
 - Frequency
 - Average
 - More Complicated

Secrets Revealed!

- The “secret” formula

$$\text{Rating} = \{0, 1, 2, 3\}$$

$$\text{Score} = \text{round}(\text{MEAN}(\text{ratings}) * 10)$$
 - OK, maybe not so secret – but effective!



Crystal Cruises | Condé Nast Traveler

CONDÉ NAST TRAVELER / CRUISE FINDER / CRUISE LINES

Crystal Cruises

CRUISE LINE WEBSITE

READERS' CHOICE AWARDS
94.2
 OVERALL SCORE

94.3	ITINERARIES
88.4	EXCURSIONS
97.7	SERVICE
91.6	CABINS
96.3	FOOD
91.2	ACTIVITIES
96.4	DESIGN

See Methodology »

READERS' CHOICE AWARDS
 Top 10 Midsize-Ship Lines

GOLD LIST
 2013

THIS FLEET SAILS TO:

Its two ships' itineraries recently extended to Antarctica, Alaska, and West Africa. Excursions include local volunteer programs, helicopter rides in New Zealand, and splurges like a drive through Monte Carlo in a Lamborghini. On board, expect "the best lecturers and personalities of any cruise line." Rooms have "more than enough hanging and drawer space, and spectacular marble bathrooms"; Crystal Penthouses come with ocean view hot tubs, and some have Swarovski chandeliers. "The true standouts are the restaurants," which are all complimentary and include Silk Road and the Sushi Bar, a specialty dining room where the sushi is made by Nobu-trained chefs and "is beyond compare." Year to year, "staff remember your favorite cocktails." The spas use Elemis skin products, and there are Nordic Walking fitness classes.

MOST POPULAR | **MOST COMMENTED**

1. The Best New Bars Around the World
2. Airport Restaurants That Really Are Worth the Trip
3. We Dare You to Walk Across These Bridges
4. Patriotic Places that Will Make You Proud to Be an American
5. Artisanal Gelato: How to Spot the Fakes

SEABOURN
 2014 WORLD CRUISE VOYAGES
 LEARN MORE

Like 134,801 people like this. Be the first of your friends.

Follow @CNTraveler 256K followers

Subscribe to The Daily Traveler Newsletter
 enter your e-mail address **SUBMIT**
 SEE AN EXAMPLE | PRIVACY POLICY

ADVERTISEMENT
 Silversea @ Cruises
 www.Silversea.com/Official-Site

Same idea, different formula

- Conde Nast Traveler tallies the percentage of people who rate a particular hotel, cruise, etc. as “very good” or “excellent”
- Relative merits of the two techniques ...
 - How do we treat a score of “good” vs. “awful”



Amazon Customer Reviews



Breaking it Down

- Popularity is an Important Metric
- Averages Can be Misleading
 - Can adjust by summing % who like
 - Can adjust by normalizing user ratings
 - normalization addresses different rating scales
 - May want to consider credibility of individual raters (history of ratings)
- More data is better ... to a point
 - Average, Count, Distribution



What's missing here?

- Who you are:
 - If I'm looking for popular new songs, I might not be looking for songs popular among 15-year-old girls
- Your context:
 - If I'm ordering an ice-cream sundae and want a recommendation for a sauce, do I want to hear that ketchup is the most popular sauce?

Tripadvisor.com

The St. Paul Grill

416 Reviews | #1 of 693 Restaurants in Saint Paul | Certificate of Excellence

\$\$\$ | Bar, American, Gluten Free, Seafood



Back to Zagat

- Some early Zagat fans argue the guide has been getting worse. Why?
 - Too many mediocre restaurants with good scores
 - Too many excellent restaurants with mediocre scores
- What's happening here?
 - Self-selection bias
 - Increased diversity of raters



Some take-away lessons

- Non-personalized popularity statistics or averages can be effective in the right application
 - Need to understand relationship between average and user need; correct average
- In many cases it can be best to show count, average, and distribution together
- For ranking, one alternative to average is the percentage who score above a threshold
 - Or below!
- Personalization would address many limitations!



Summary Statistics I



UNIVERSITY OF MINNESOTA