



Yelp Me Out: Finding Similar Restaurant Reviewers

Will Huguenin
Metis Final Project, June 23, 2016

Blog: huguedata.wordpress.com
Github: [whugue](https://github.com/whugue)



OvrTheMoon

Southport, CT

252 friends

902 reviews

Elite '15



4/29/12

My husband and I had heard good things and just recently got around to trying it-- cannot recommend it highly enough!!! As magical as advertised. Right after giving birth I felt waves of maternal love wash over me which was totally indescribable. Was followed by several months of deep emotional bonding. This newborn is my entire reason for living and has brought such meaning to my life in a way nothing else has. Being a parent is so fulfilling on so many levels. Can't stop talking about it to everyone!! You are missing out if you don't try this!!!

"We wont be going there again."



Reviewed 3 March 2012

We went on Saturday night, walked in the get our table. loud and also with people talking had to shout at my wife me. Once we were seated after a while the meat came



Lotty Kenton



This place is really good...I.had baked artichoke and grilled salmon..delicious!!!!

Like · Comment · about 2 months ago



Katie Brown



The calamari was exceptional and the night bar to lounge to night club was quite fun!

Like · Comment · about 8 months ago



Joseph J DeSantis



A nice place to grab a bite. Strong drinks b

Like · Comment · about 2 months ago



4/29/12

Jerry B.

Chicago, IL

0 friends

3 reviews



9/19/2014

I have never even been to this res been to this city. I live in Chicago. fact, I had a dream that I ate there the seafood risotto. It tasted like n seafood risotto? No. I don't even v

Was this review ...?



Michael H.

Martinez, CA

0 friends

5 reviews



9/19/2014

This is truly the best one star resta to. I agree with Don N. Why no su pizza. Or pizza with You should



Harmony W.

Seattle, WA

99

+

Share · Compliment

Oxo Tower Restaurant, T

Tower Restaurant, The
Tower Restaurant, The

Recent reviews



January 2008)

any positive reviews so, I decided to take my dog up the Oxo Tower .expect, I did have a little trouble getting in, but once inside, the or ,as breathtaking. It put to rest all my obvious fears regarding pet entry. The on ,it was a couple of adjacent onlookers who seemed overly concerned about the service my dog was receiving. It is possible, of course, that they were simply admiring the size of my portion, and were not being cynical about me being with a dog. This one thing could not ruin what was a wonderful and memorable experience for both parties. I have never seen my dog, Chalky's, tail wag so furiously.

Respond to Author

Review by Johnny R (23 January 2008)

I wouldn't call myself a regular visitor to the Oxo Tower. I've found the main courses a little on the dry side, however, the desserts were a different matter altogether. Their chocolate sauces were a particular speciality - it gets everywhere, but is definitely worth the mess!

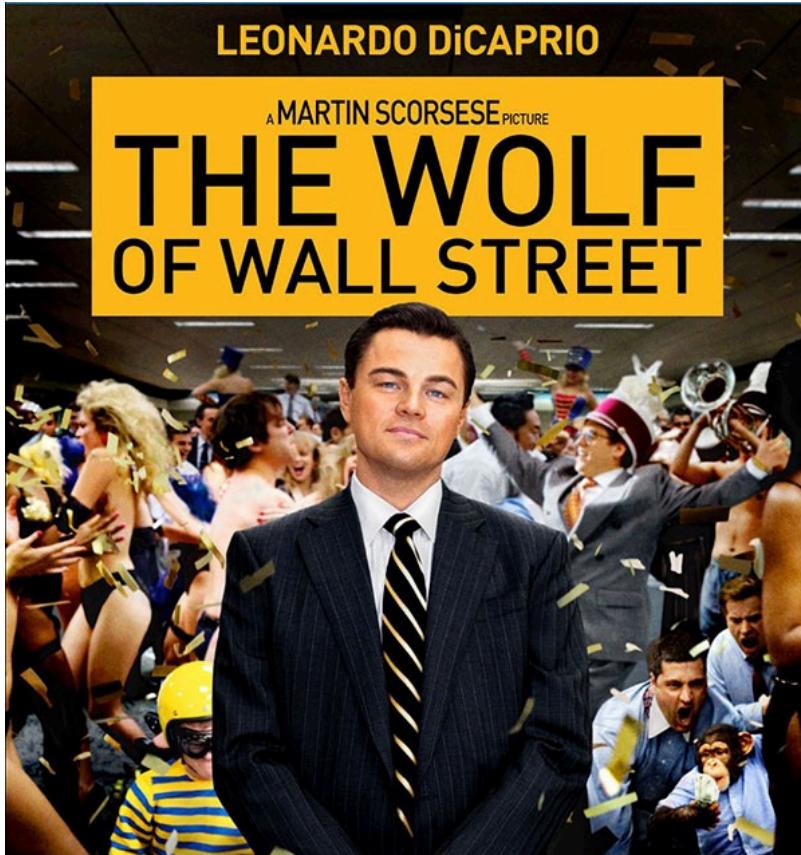
Respond to Author

Review by David K (22 January 2008)

I called there and although they were busy they managed to get us a table. My girlfriend had a portion of pork which she scoffed down rather hungrily, and I nibbled away on a fish pie which was very succulent. I found the view quite amazing and the whole experience very enjoyable. I realise it's not the cheapest establishment so I can leave the back pocket feeling quite tight. Overall it's definitely worth a visit up there.

Respond to Author

Not Always Helpful...



One Star

By Joe Watson - December 14, 2014

There were no wolves in the movie.

0 of 3 people found this review helpful

102 Million
Reviews



102 Million
Reviews



*...so how can Yelp find reviewers
with similar tastes and preferences?*

Approach: Semi-Supervised Topic Modeling

Step (1): Train Text Classifier on Human-Labelled Data



Food & Drink



Ambience



Service



Value

Approach: Semi-Supervised Topic Modeling

Step (2): Predict Topics for Each Sentence in Unlabelled Yelp Data



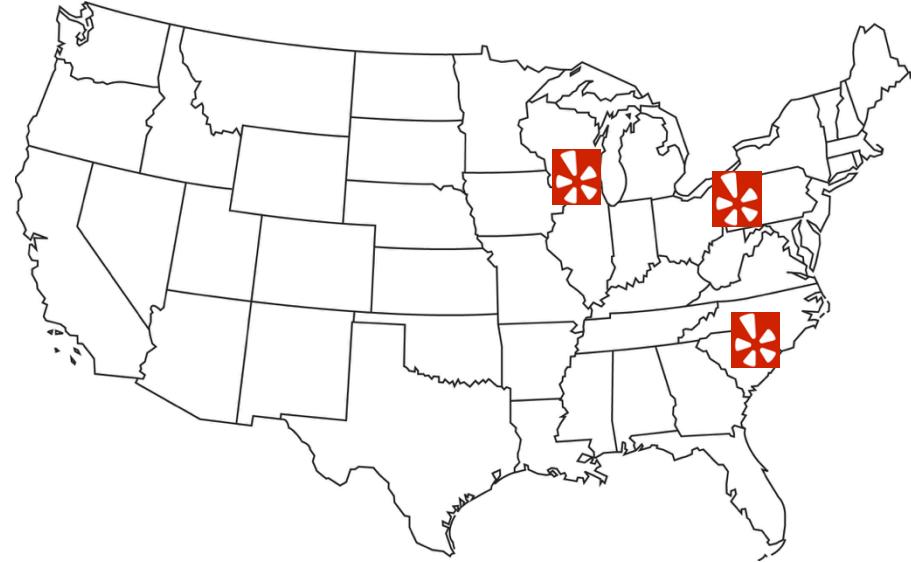
62,000



204,000

*“The trout was
heavenly but
the service was
terrible”*

1,800,000



Approach: Semi-Supervised Topic Modeling

Step (2): Predict Topics for Each Sentence in Unlabelled Yelp Data



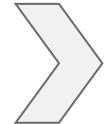
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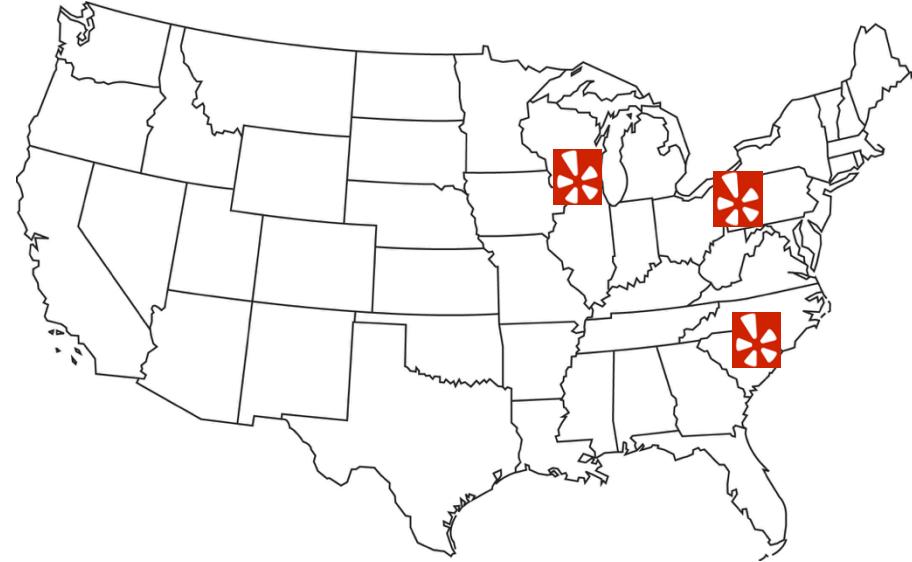
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"The **trout** was
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1,800,000



Linear
SVMs



Approach: Semi-Supervised Topic Modeling

Step (2): Predict Topics for Each Sentence in Unlabelled Yelp Data



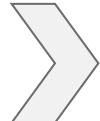
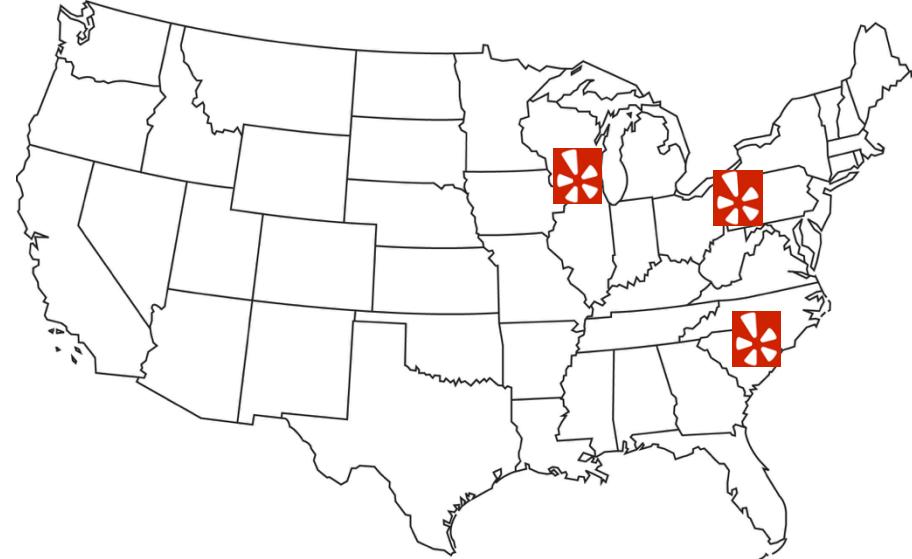
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Linear
SVMs



Tagged Topics:
Food, Service

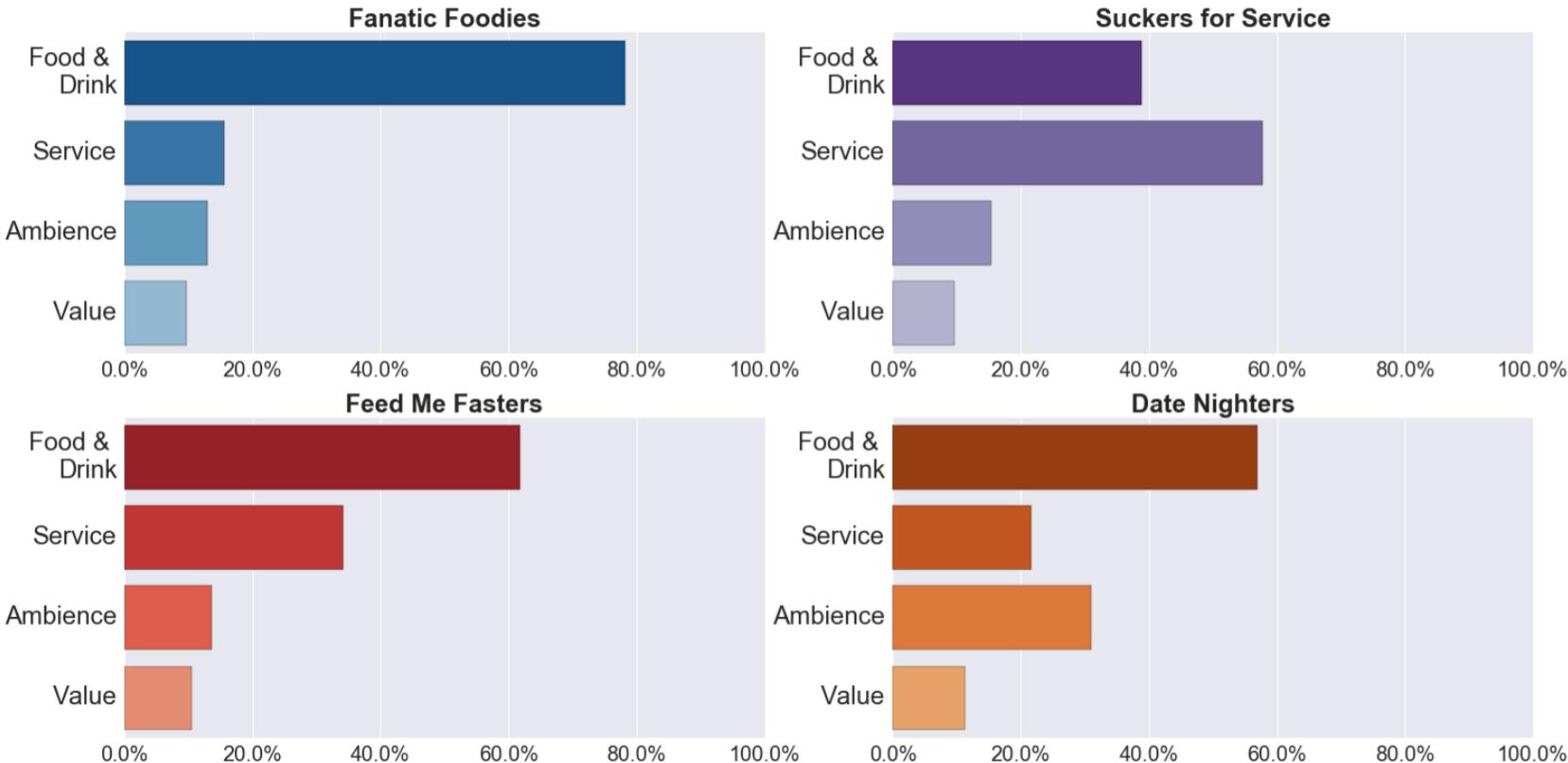
Approach: Semi-Supervised Topic Modeling

Step (3): Aggregate Data to User Level

User	Percent of Sentences Discussing...			
	Food & Drink	Service	Ambience	Value
Bob B.	75%	15%	8%	2%
Christie L.	72%	10%	10%	8%
Tamara T.	50%	30%	5%	15%
Phil K.	35%	45%	6%	14%
...				

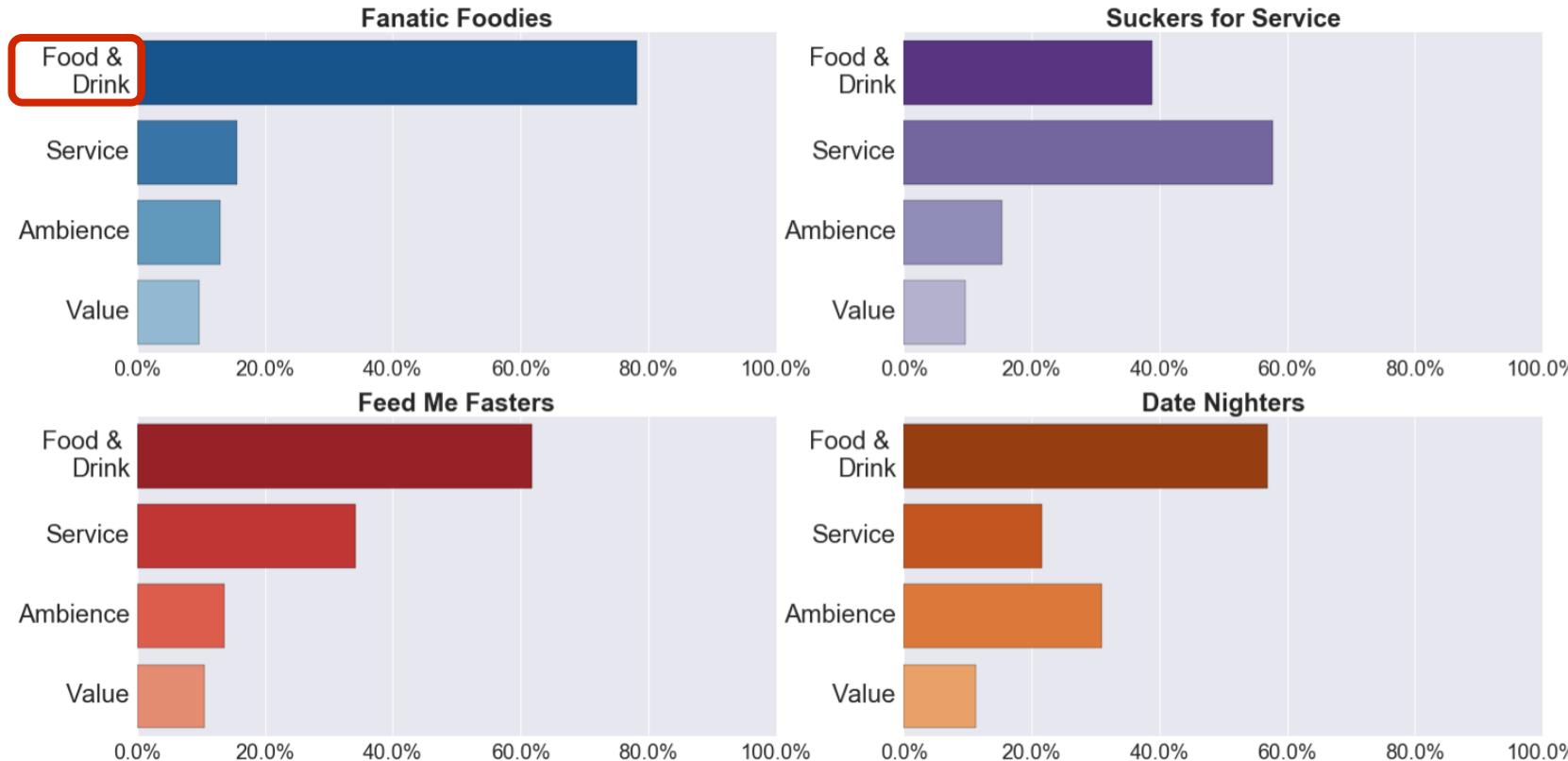
Approach: Semi-Supervised Topic Modeling

Step (4): Cluster Users Based on Topics Most Discussed (Most Talkative Quartile)



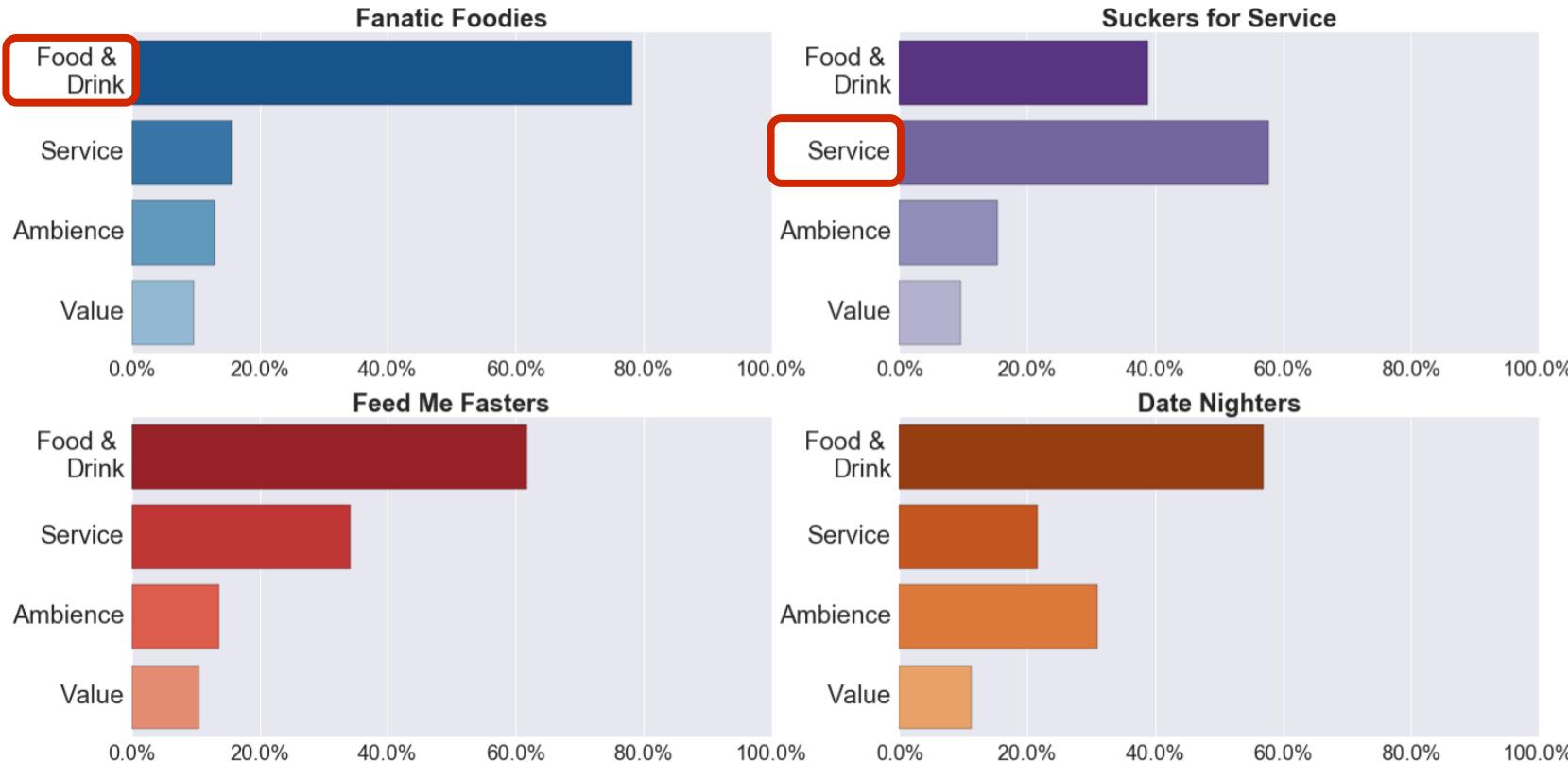
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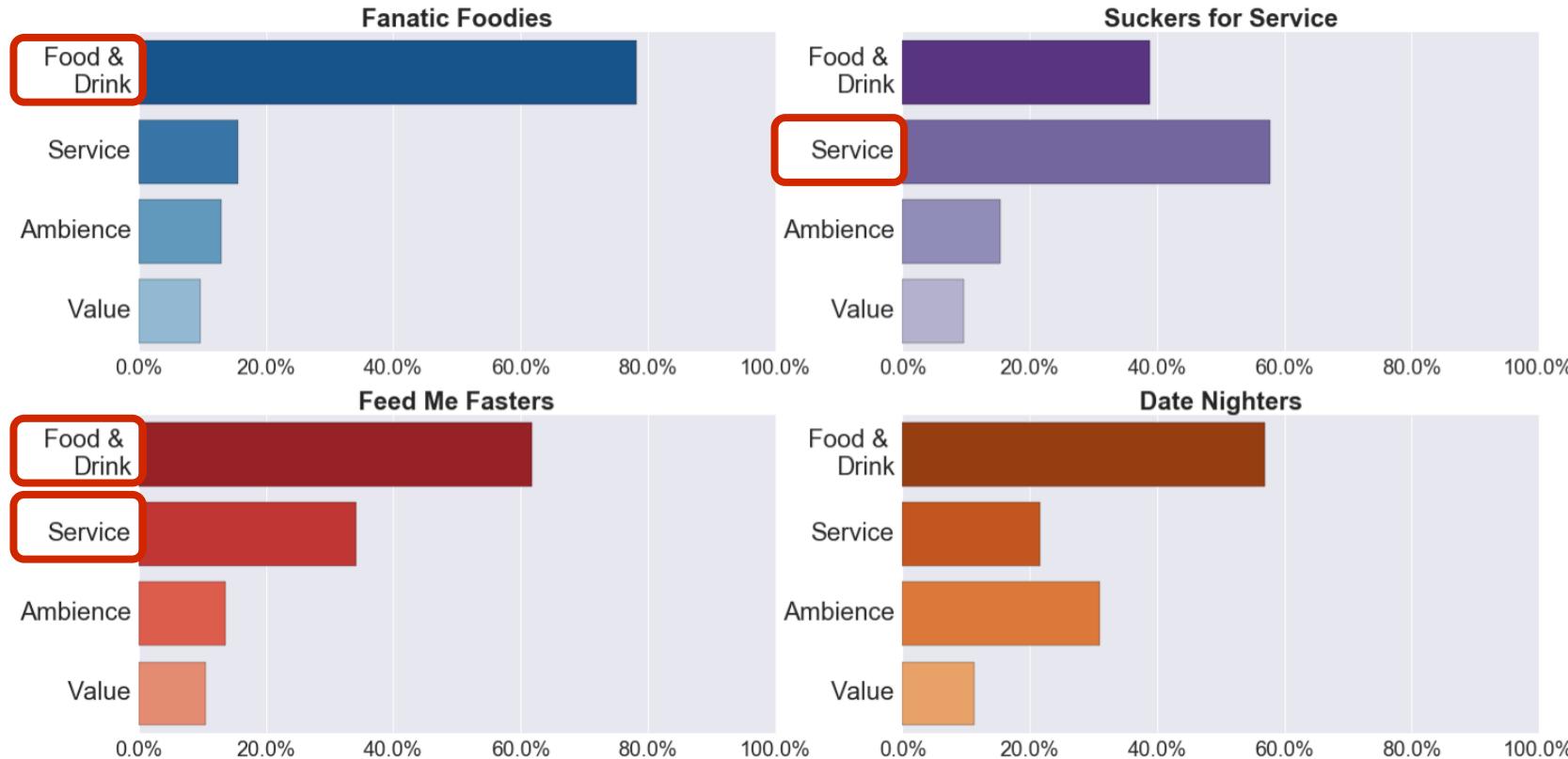
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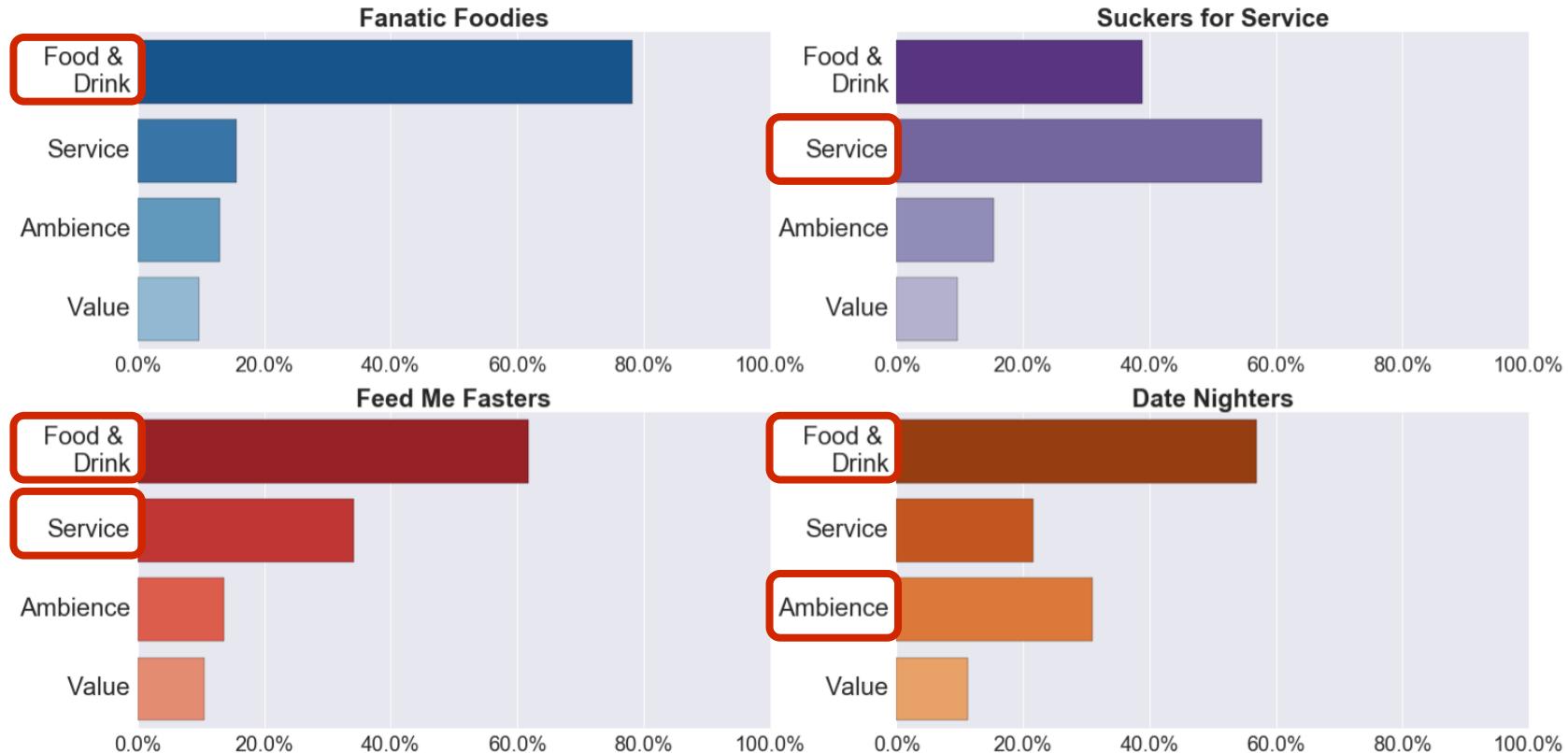
Approach: Semi-Supervised Topic Modeling

Step (4): Cluster Users Based on Topics Most Discussed (Most Talkative Quartile)



Approach: Semi-Supervised Topic Modeling

Step (4): Segment Users Based on Topics Most Discussed (Most Talkative Quartile)



Cluster Uses

- **Page Rank Reviews:** Show reviews from people in a user's cluster first
- **Customize Average Star Ratings:** Weight reviews according to cluster
- **Market Analytics:** Help Yelp businesses better understand customer base

Thank you!



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