Business Recommendations Using Topic Modelling

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What Should I Offer !!

Want to open a restaurant in Raleigh !

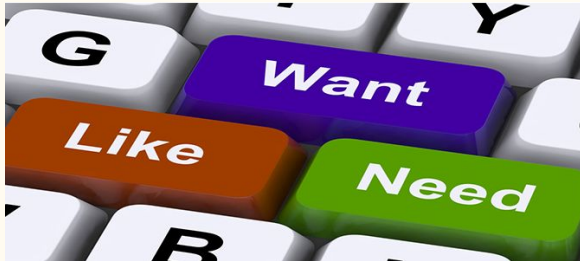What should offer ?

- **Food**: Steak, Quesadilla, Burrito
- **Ambience**: Music, WiFi
- **Service**: Quick Order, Fast Delivery

The Convenient Way

The Convenient Way

- Ask for User's Opinion.

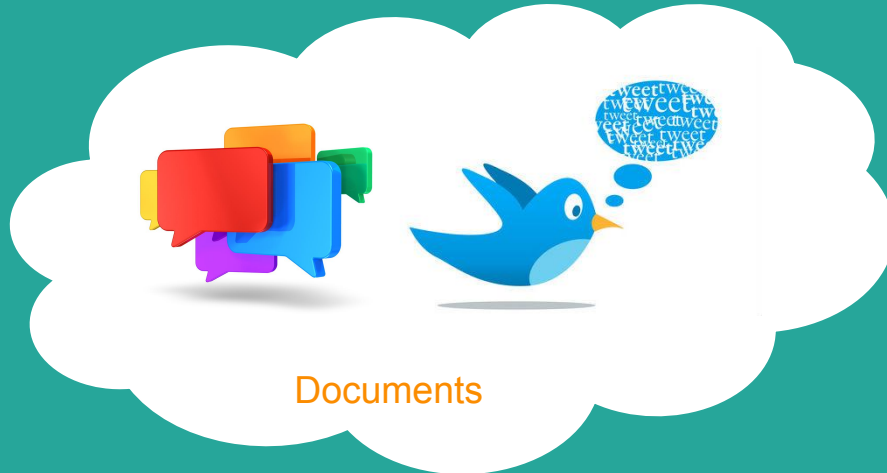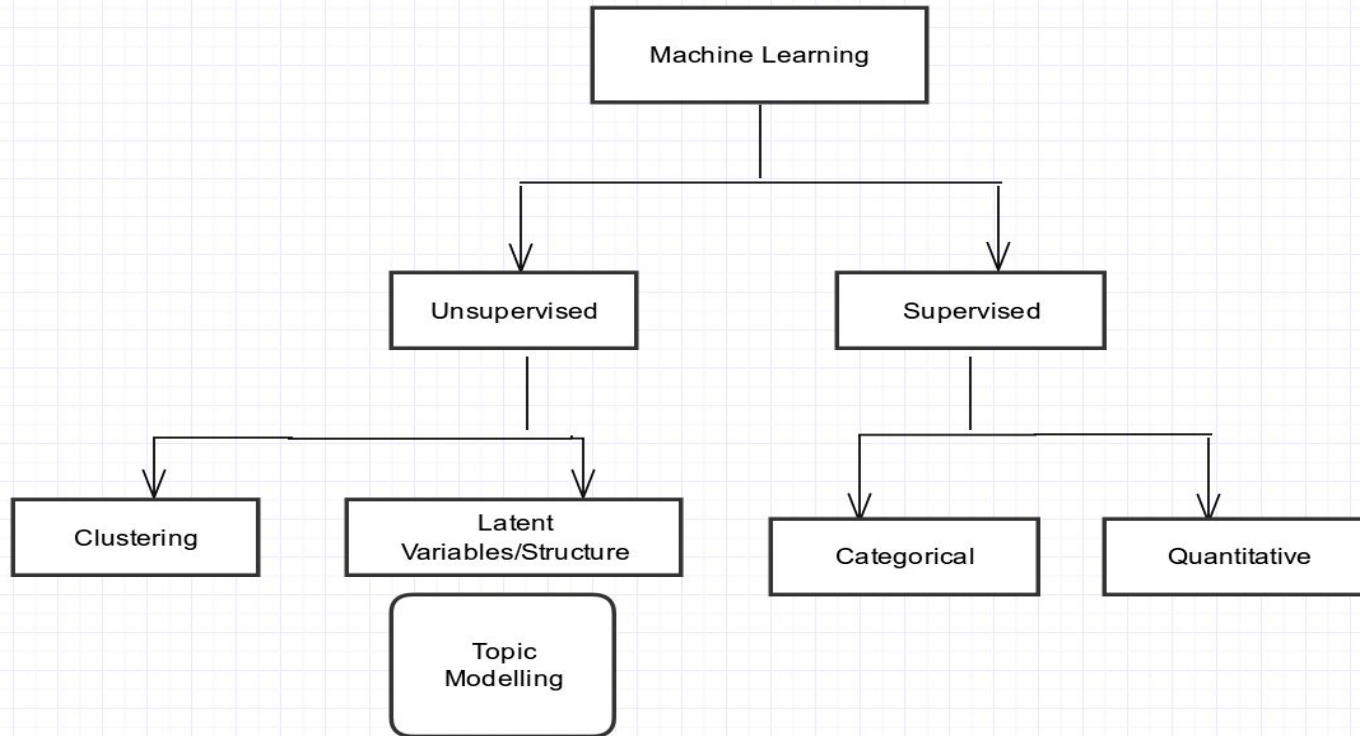- Look for reviews of neighbouring restaurant.

The Experiment

Topic Modelling

- Discover topics in large group of documents.
- Grouping documents based on the probability of words occurring in each document.

Documents

Topics

Topic Modelling

Topic Modelling

⭐⭐⭐⭐⭐ 4/17/2016

✔ 1 check-in

I'm not a great fan of NC wines but I decided to give another chance and to my very delightful surprise I had a great wine, and medium rare burger to go along with.
Biltmore estate Syrah - excellent.
Bacon cheeseburger - great!
Excellent and professional service.
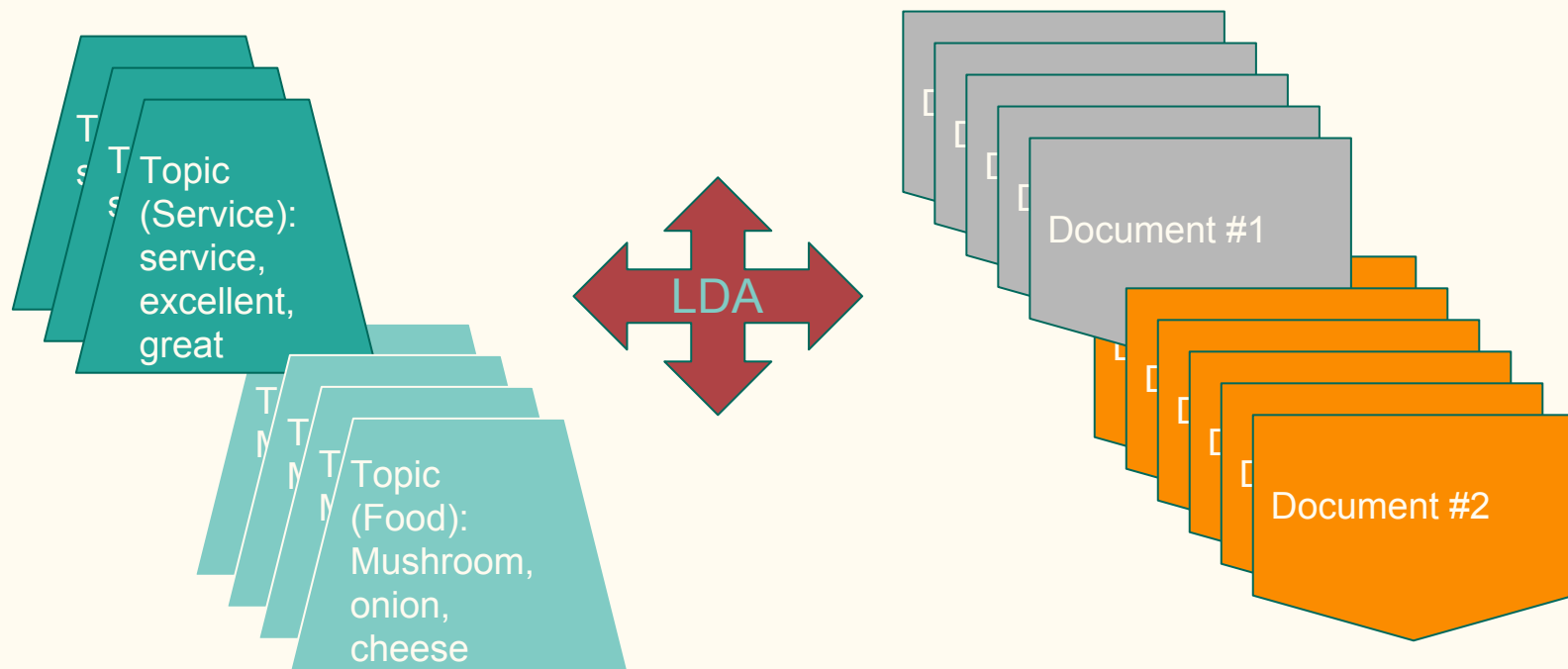This is a great airport place for pre flight relaxation!

⭐⭐⭐⭐⭐ 11/30/2015

✔ 1 check-in

I stopped in while on a layover, and the sample omelet presentation is what intrigued me. The food was so good. I got a mushroom, onion, spinach and goat cheese omelet that came with a side of potatoes. Everything was seasoned to perfection. I didn't even need ketchup, but of course I did. What's potatoes without ketchup? :)
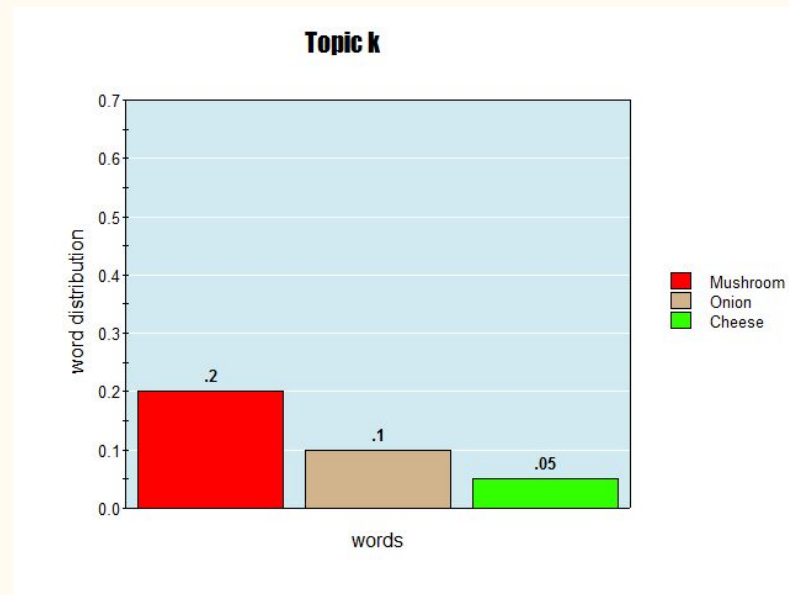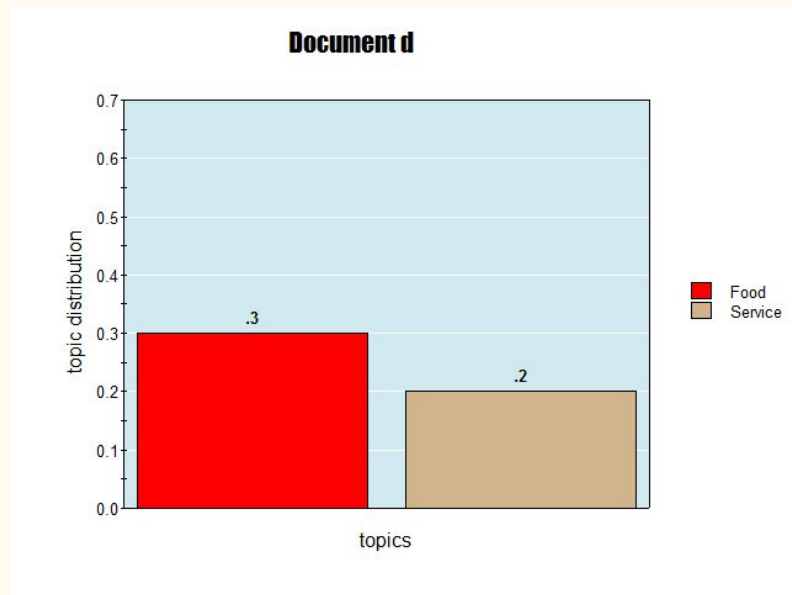
Superb customer service and reasonably priced. Stop in, you won't be disappointed.

Topic Modelling Using LDA

Topic (Service): service, excellent, great

Topic (Food): Mushroom, onion, cheese

LDA

Document #1

Document #2

Latent Dirichlet Allocation(LDA)

- Documents : Distribution of topics.
- Topics: Distribution of words.

Latent Dirichlet Allocation(LDA)

How it works!

- Determine the number of words in a document.
- Determine the mixture of topics in that document.
- Using each document and topic multinomial distribution, output words to fill the topic's word slot.
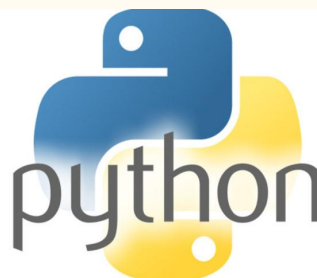
Resources

Resources

References

References

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- What is a good explanation of Latent Dirichlet Allocation? : Quora
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- Topic Models: http://videolectures.net/