

Job Recommender



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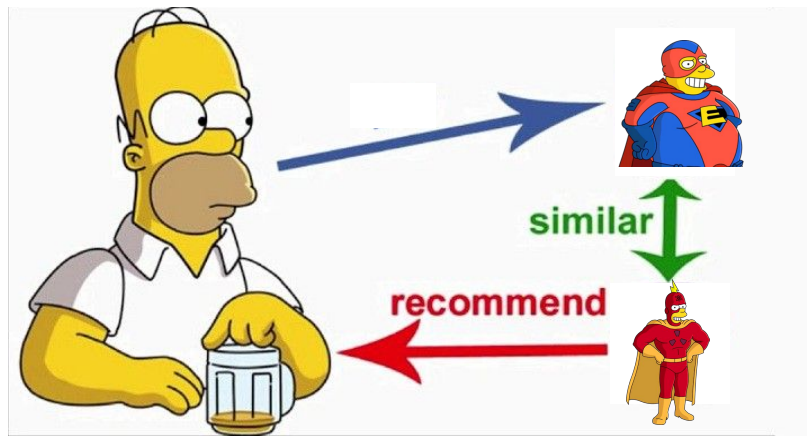
Job Searching Sucks!

- Job searching can be a tedious process
 - Check job descriptions to see if it matches your interest
 - Time wasted on reading each job's description

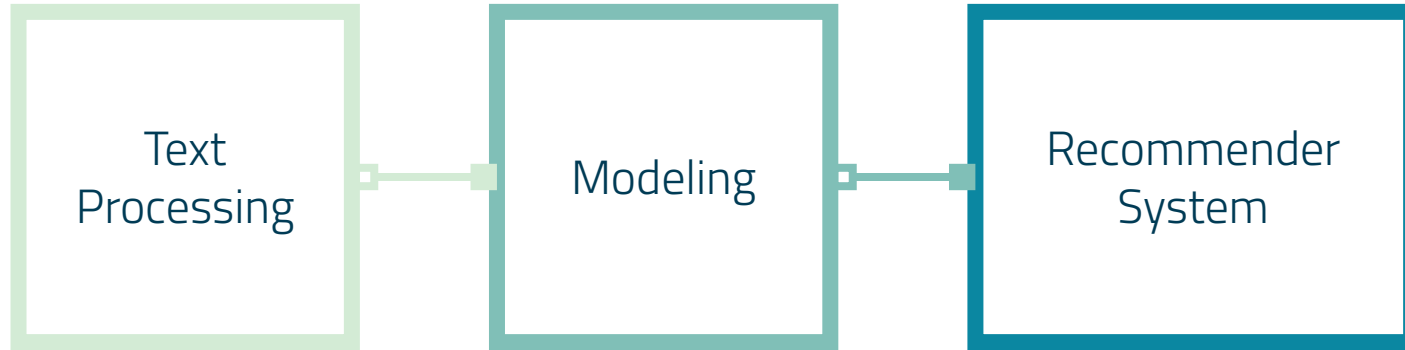


Job Recommender System

- Systems that recommends job posting
 - Results based on user input/interest
- Speed up job searching
 - Apply to more jobs
 - Focus on



Methodology



Data Set

- Data set from Kaggle
 - Company name
 - Job description
 - Job title
 - Location
 - Employment Type
 - Industry

- Example:
 - Tacolicious
 - Serve food/drinks to customers in a professional manner
 - Server
 - Palo Alto, California
 - Part-Time
 - Food & Beverage



**WE'RE
HIRING!**

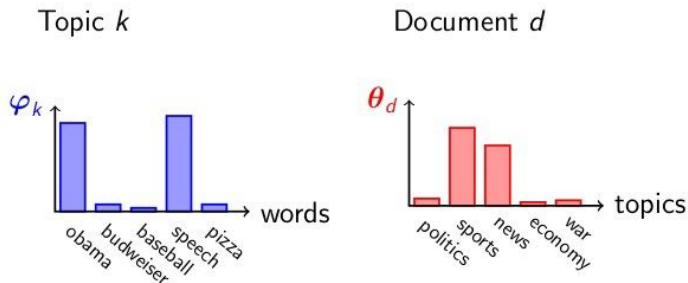
Modeling

- Latent Dirichlet Allocation (LDA)
 - Each document can be described by a distribution of topics
 - Each topic can be described by a distribution of words
- Find topics a document belongs to, based on the words in it

Latent Dirichlet Allocation

LDA discovers topics into a collection of documents.

LDA tags each document with topics.



Topics

Beauty Products/ Retail

Sales Representative/ Product Support

Nurse/ Health Care

Administrative/ Office

Security/ Product Maintenance

Customer Services

Accountant/ Financial/ Bookkeeper



Topics

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Nurse/ Health Care

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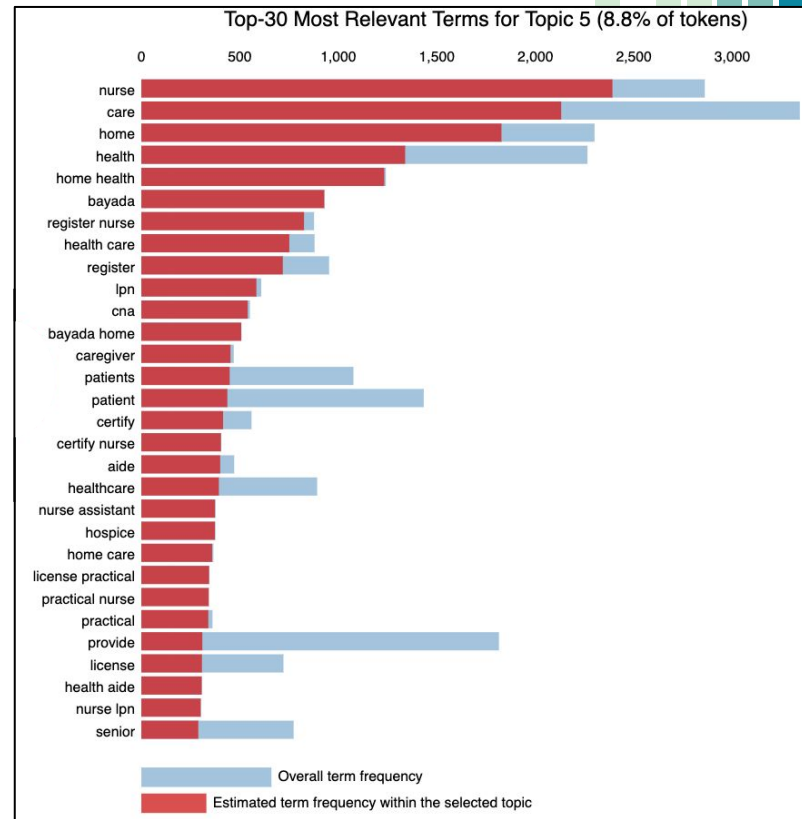
Security/ Product Maintenance

Customer Services

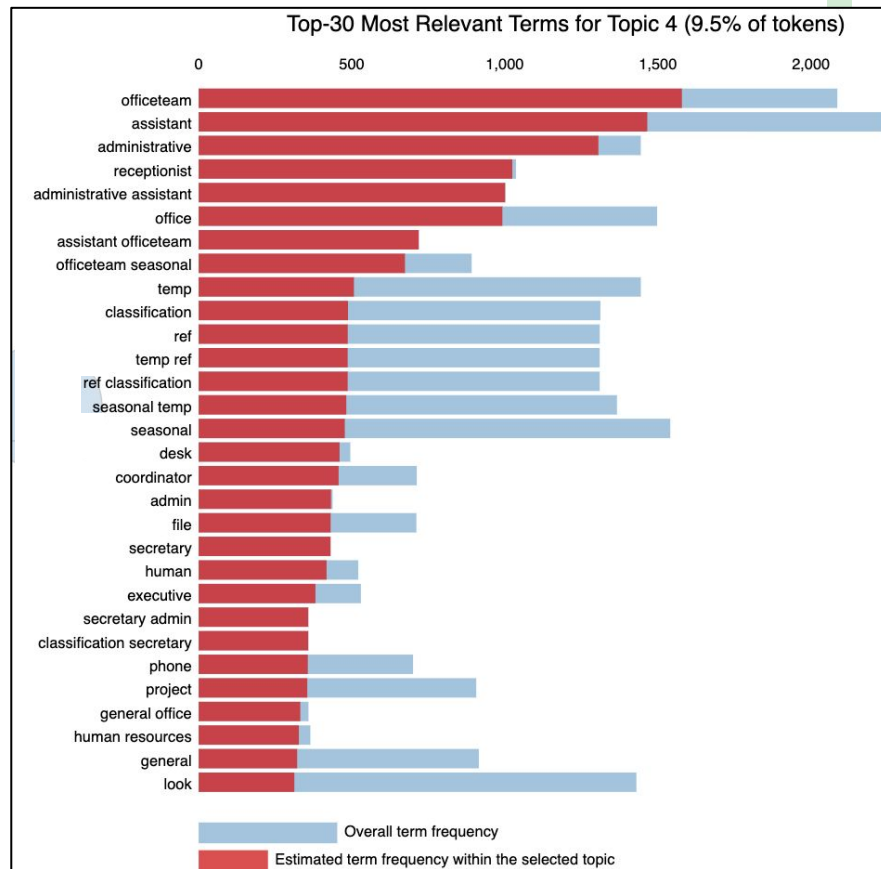
Accountant/ Financial/ Bookkeeper



Topics - Health Care

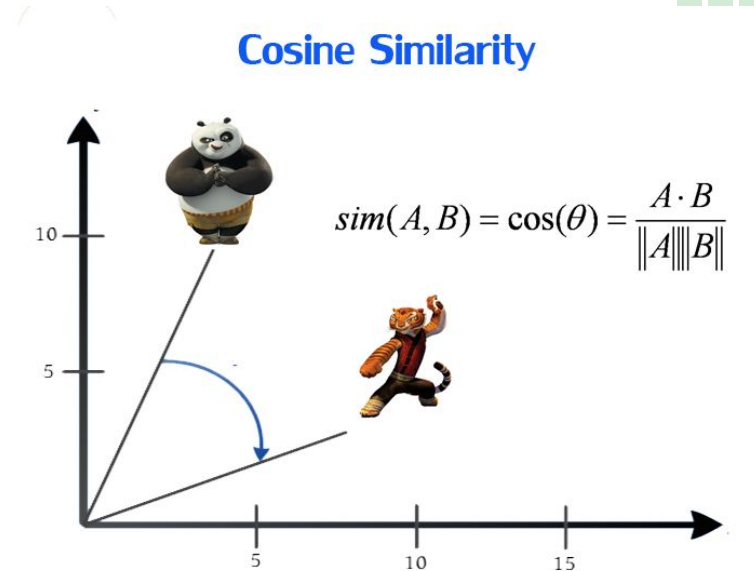


Topics - Administrative



Recommender System

- Based on Cosine Similarity
 - Convert each document to vector
 - Convert input to vector
 - Measure cosine of the angle between two vectors



Recommender System

Input	Output
"I want to help consumers"	Macy's Seasonal Retail Commision Sales Women's Shoes, Part Time
"Telephone"	Customer Service/Sales @ Vector Marketing

Future Work

- Gather more data
- Get more defined topics
 - Vectorizing parameters
 - Stemming vs. Lemmatizing
 - Number of topics
- Try other models
- Try different recommender systems
 - Collaborative recommender system



Appendix

