### WHAT'S COOKING?

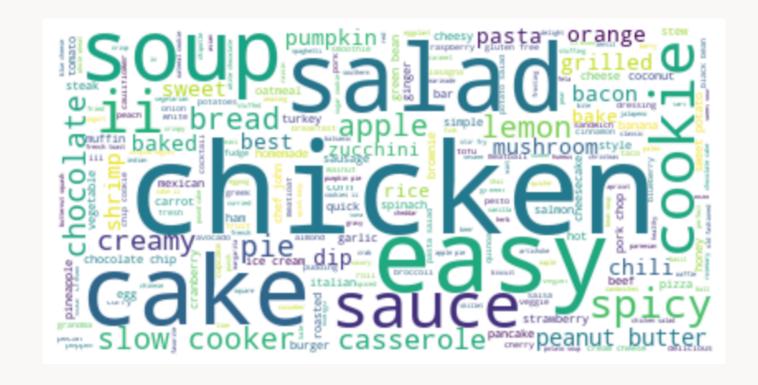
GURUNADH PARINANDI NOVEMBER 13, 2020



#### **OBJECTIVE**

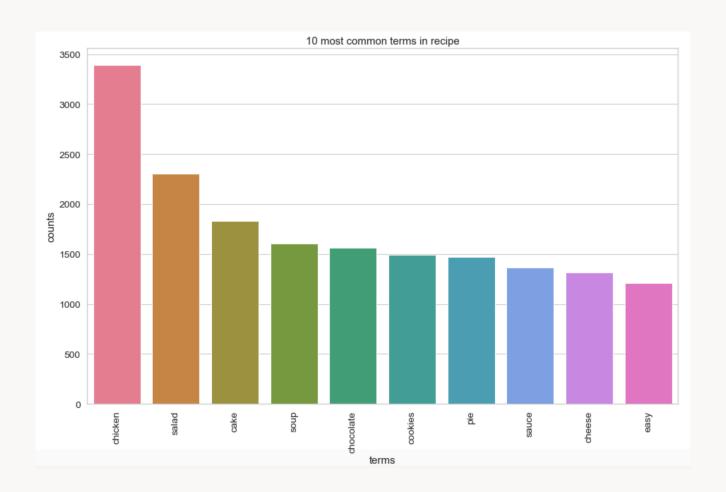
- Better understand Semantic Similarities and trends from a corpus of 39,522 recipe titles.
- Scraped data from www.Allrecipes.com:
  - Recipe Title
  - Recipe Ingredients
  - Recipe Instructions

### RECIPE TITLECOMMON TERMS

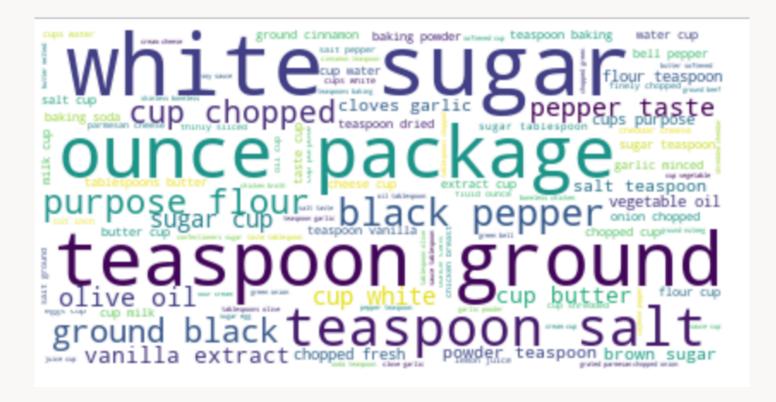


\* Wordcloud library

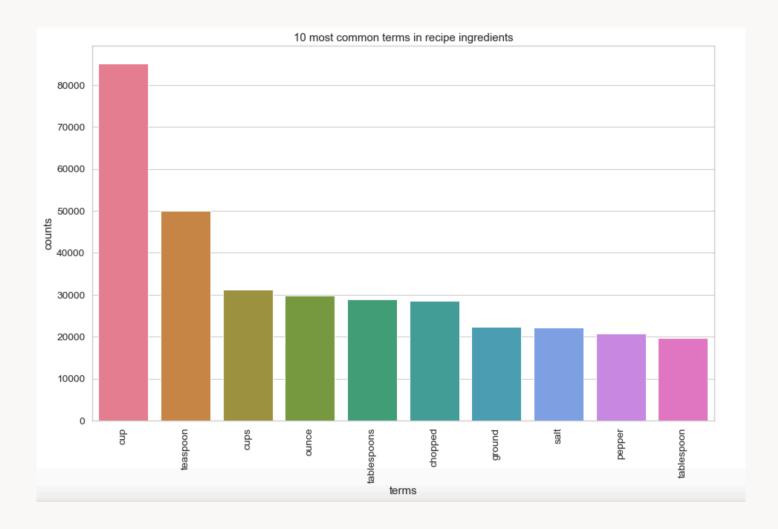
### RECIPE TITLE-COMMON TERMS



# RECIPE INGREDIENTS COMMON TERMS



# RECIPE INGREDIENTSCOMMON TERMS



### K-MEANS CLUSTERING (n = 5)

Recipe Title

```
blueberry shepherd pie custard pie butter pie butter pie pudding grandma key line ppie i pie pumpkin pumpkin pumpkin ple ili peasy sweet potato peasure lemon pecan pie describe and cheesecake potato pie bar pie crust pie
```

Cluster 0 - Savory

```
cheesecake Creamy brownie baked turkey lemont salmon COOKle Cookers lemont salmon COOKle Cookers lemont salmon COOKle Cookers lemont steam pancake to crafterly allowed pizza dup cooker lee cream treat cookers lee cream steam pancake to crafterly allowed pizza dup cooker lee cream treat cookers lee creat cookers lee cream treat cookers lee cream treat cookers lee c
```

Cluster 1 - Easy

### K-MEANS CLUSTERING (N = 5)

Recipe Title

```
macaroni cheese stuffed dressing salad spicy salad spicy
```

Cluster 2 - Cheesy

```
bean salad Chicken broccoli orange broccoli salad broccoli orange broccoli salad sal
```

Cluster 3 - Chicken

```
cheese Passin banana bread raisin por cheese Passin banana bread raisin por cheese Passin bread machine rye of the street tonato sourdough french pread pizza banana chanberry zucchini bread pizza banana butteratik pineapple atrawberry probable banana nut bread pineapple atrawberry probable bread in choney chocolate banana nut bread probable bread in control probable bread probab
```

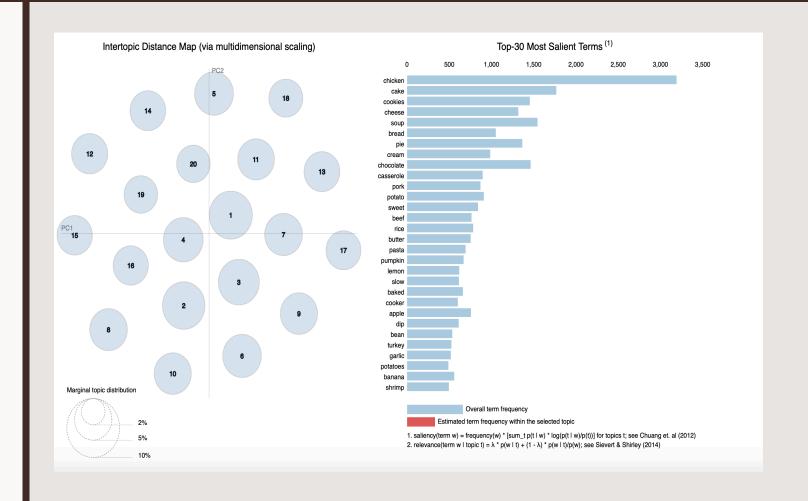
Cluster 4 - Bread

#### pyLDAvis-tsne

Recipe Title

<u>Hyperlink</u>

http://localhost:8888/view/name.html



### pyLDAvis-tsne

Recipe Title

<u>Hyperlink</u>

http://localhost:8888/view/name.html

Topic 1	Pies (butter, apple)
Topic 2	Chicken (wings, rice)
Topic 3	Soups (vegetables, spicy)
Topic 11	Pork (garlic, chops)
Topic 13	Potatos (grilled, herb)
Topic 14	Beef (mushroom, lasagna)
Topic 17	Slow Cooker (bbq)
Topic 20	Dressing (famous, cornbread)

#### Word2Vec-tsne

Recipe Title



#### **Next Steps**

- Expand corpus of Recipe Titles to other websites (foodnetwork.com).
- Use similar methodology to understand similarities within Recipe Ingredients and Instructions.
- Construct a recommender system where user inputs ingredients and a recipe is returned.