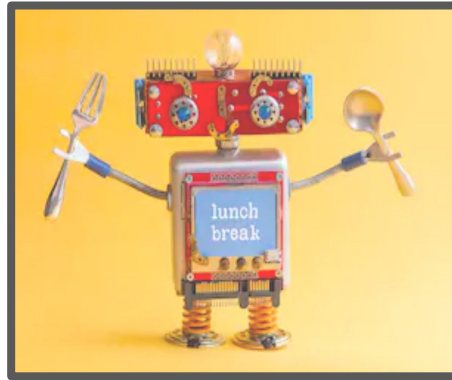


# Picked For Me

*An app to aid picky eaters find diverse recipes*



Karen Warmbein | Flatiron School | 01/31/2020

# Business Understanding

- Problem: picky eaters
  - Imagine sitting in front of your computer... combing through pages and pages of recipes... trying to find out what to eat for supper.
  - Well, look no more! If you have strong opinions about food, this app is here to help.
  - Enter a set of ingredients that you like, those you don't, and it will recommend a good recipe for you.
- Goal: Create a content-based recommendation system for recipes based on 'similar' ingredients

# Data

- 10,000+ recipes from Food.com
- 12 Features:
  - Used:
    - Unique ID
    - Recipe name
    - Ingredients list
  - Other: Tags, Description, Nutrition, +6 more
- Text preprocessing on ingredients
  - Replace characters and spaces

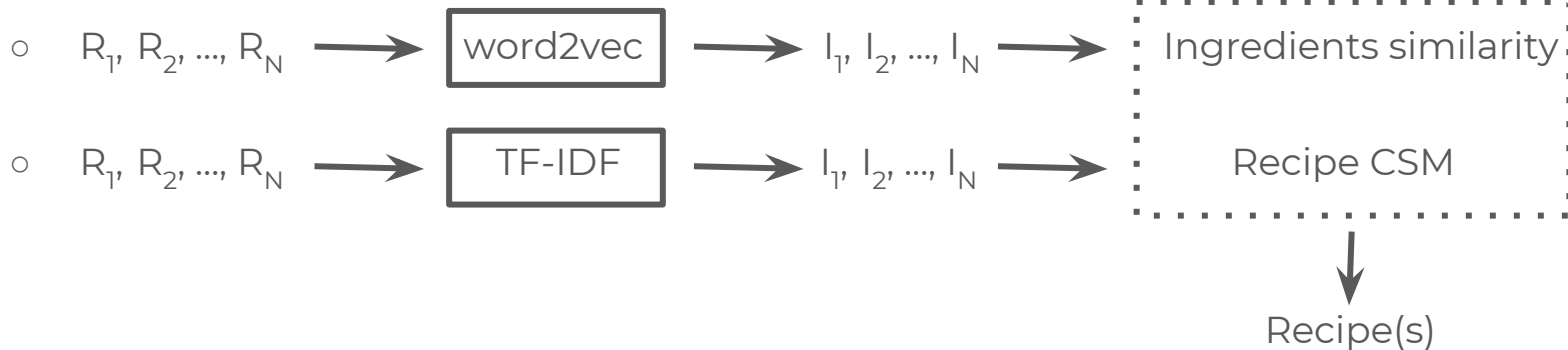
# Model

- Tools

- Numpy, pandas, sklearn, gensim (Python)
- Google Colab

- Process

- 'Information extraction' from corpus



# Model: word2vec

- Intro to an unsupervised ML process
  - Produces a word embedding in “low” dimensional vector space from corpus
  - Group vectors of similar contextual meaning together
  - Operations on words
    - Ex: ‘apple’ + ‘purple’  $\sim$  ‘plum’
- Shallow neural net
  - Nudges similar vectors closer together during training

# Results

- word2vec allows for a list of +/- associations
  - Outputs a list of 'similar' ingredients
- Filter system
  - Searches for recipes in the corpus with those similar ingredients
- TF-IDF map
  - Points to recipes with similar ingredients

# Next Steps

- Build Flask app
- Scale recipes (>100K)
- Handle out-of-vocabulary ingredients
  - Ex: 'rainier cherries'
- Additional user tests
  - Verify that all the paths work as expected
- Explore Doc2Vec and replace TF-IDF

# Picked For Me

*An app to aid picky eaters find diverse recipes*

