RECIPES FOR THE OVERWHELMED HOME CHEF

HOOHACKS2022 DATA SCIENCE PROJECT

MEET THE TEAM

Ryan is a graduate student in the UVA School of Data Science. His capstone work involves predicting signal faults in a particle accelerator using various signal processing techniques and deep learning architectures. In his free time, he enjoys trying not to overwhelmed making even the simplest recipes from his favorite recipe blogs.
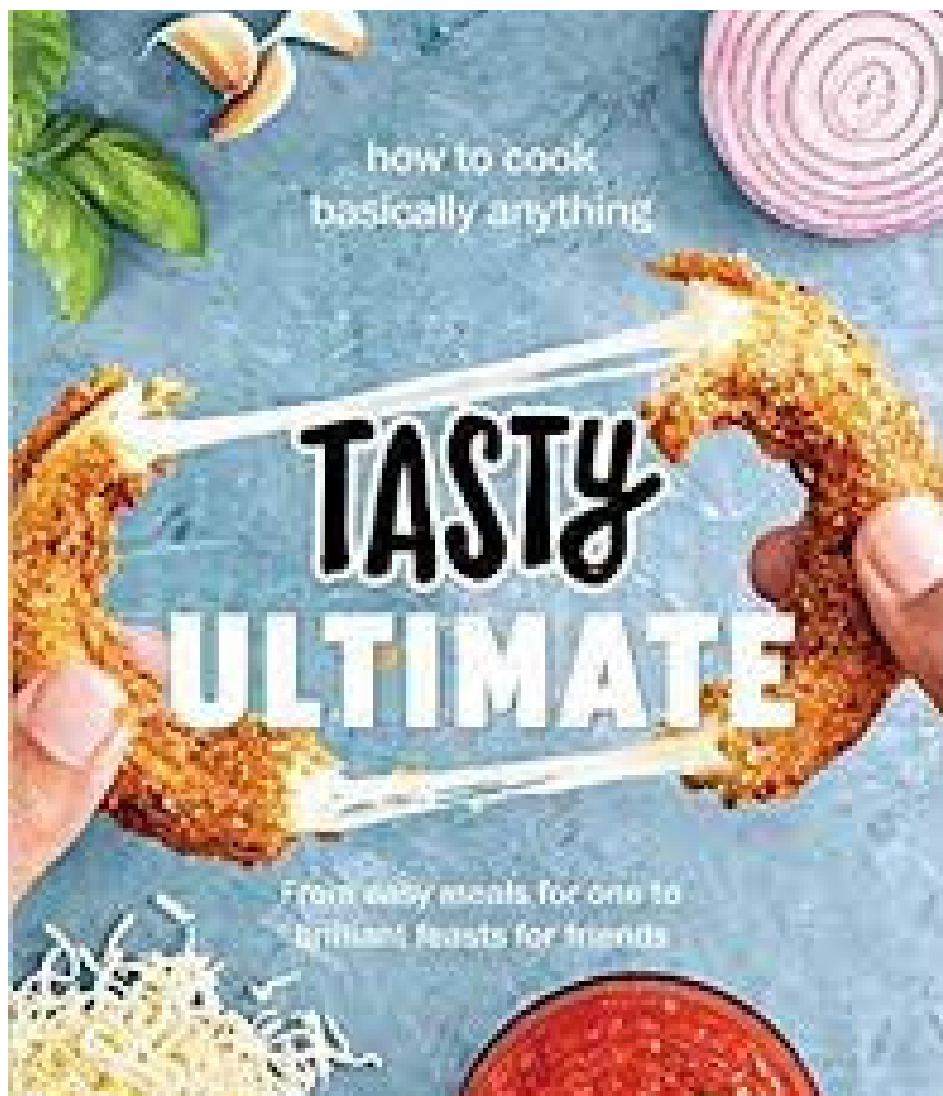
RECIPE ORGANIZATION

Ingredients

1. Difficult to Read
2. Easy to Mismeasure
3. Many Recipes at Once

Problem

The way recipes are written make it Read. Especially when you are making Once, it can be Mismeasure!

how to cook basically anything

TASTY ULTIMATE

From daily meals for one to brilliant feasts for friends

THE DATA

Please web scraped responsibly!

- search for recipes by ingredient
- gather recipe links and delete duplicates
- retrieve ingredients and instruction
- save into a .csv for later analysis

BAG OF WORDS BAYES APPRAOCH

FIND ROOT INGREDIENT
TERM FREQUENCY OF BAGGED INSTRUCTIONS TO FIND MAP

INSERT AND REFORMAT
FIND ALL INGREDIENTS AND ADD MEASUREMENTS

COLLECT MEASUREMENT
CREATE (MEASUREMENT, INGREDIENT) TUPLE

Teriyaki Chicken Fried Rice Dome

featured in **10 Rice Recipes Perfect For Dinner**

For the nights you want to serve a classic favorite, but want to play things up, serve this teriyaki chicken fried rice dome. It's basically a deconstructed fried rice dish prepared using a bundt cake pan. Just make sure to serve it on a wide platter, so the rice has room to fall apart once you start cutting slices of it.

Ingredients
for 6 servings

¼ cup sugar

½ cup soy sauce, plus 3 tablespoons, divided

½ cup mirin

2 lb boneless, skinless chicken thighs, sliced

1 tablespoon canola oil

2 carrots, peeled and minced

1 medium onion, minced

1 red bell pepper, seeded and minced

salt, to taste

Preparation

1 In a liquid measuring cup or small bowl, mix together the sugar, ½ cup (120 ml) soy sauce, and the mirin.

2 Add the chicken to a large bowl. Pour ½ cup (120 ml) of the marinade over the chicken and save the rest for later. Toss the chicken to coat, cover with plastic wrap, and marinate in the fridge for 30 minutes.

3 Add the canola oil to a wok or a large skillet over high heat. When the oil begins to shimmer, add the carrots, onion, and pepper. Season with salt and pepper. Cook, stirring occasionally, until starting to soften, 5 minutes.

1 tablespoon canola oil

("1 tablespoon", canola)

"add the 1 tablespoon canola oil"

Updated Recipe

https://tasty.co/recipe/fusion-chana-masala-tacos

'1: First, make Chana Masala as follows: Heat **2 tablespoons** avocado oil in a pan',

'2: To the pan, add **2 whol**e bay leaves, **2 whole** dry chili pepper, cinnamon sticks and whole **½ teaspoon** cumin seeds',

 '3: Once **½ teaspoon** cumin seeds start to sizzle, add **diced 1 medium** onion and cook until slightly brown and translucent',

 '4: Lower the heat and add the crushed or fresh **2 roma** tomatoes, **2 tablespoons** ginger and **3 cloves** garlic and mixwell',

 '5: Add **1 teaspoon** salt, **½ teaspoon** turmeric, **2 teaspoons** paprika, red chili powder, **2 teaspoons** chana masala mix and water',

 '6: Mix well',

 '7: Let simmer for about 5 minutes with lid on',

 '8: Add cooked **4 cups** chickpeas, mix well and let cook for 7-10 minutes',

 '9: Then, add the **2 tablespoons** taco seasoning to the **2 teaspoons** chana masala you just made',

 '10: Mash with masher and add water as needed for a loose but not runny consistency',

 '11: Heat in a saucepan',

 '12: Stir occasionally to prevent sticking',

 '13: Serve mixture on 2 tablespoons taco shells with lettuce, 2 roma tomatoes, 2 tablespoons avocado, optional cheese and salsa'
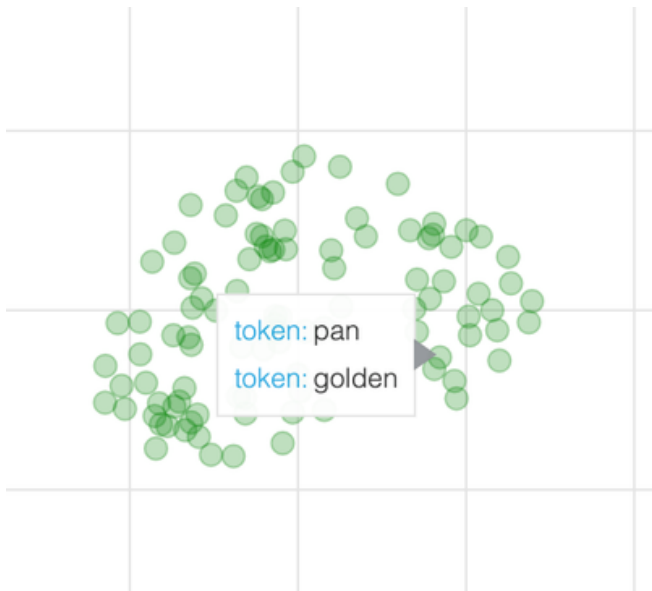
FUTURE WORK

WORD2VEC EMBEDDING FOR RECIPE CLUSTER

APPLYING WORD2VEC EMBEDDING

THE PROCESS

1. combine ingredient and instruction text
2. train word2vec embedding to 150 dimensional space
3. cluster and check similarity between recipes within clusters

OUR DIFFERENT KINDS OF SPAGHETTI

Good Cluster

1. **Chocolate Raspberry Zebra Cake**
2. **Fudgy Brownie Cookies**
3. **Classic Red Velvet Cake**

Bad Cluster

1. **Vegetable And Shrimp Lumpia**
2. **Slow Cooker Vegan Butternut Squash Mac**
3. **Coconut Broth Clams**

POSSIBLE EXTENSIONS

WINE PARING
RECOMMENDATION

MENU DESIGN
RECOMMENDATION

ORIGINAL RECIPE
CONSTRUCTION

Where to find my work

https://github.com/rpindale/HooHacks_Cooking

THANK YOU!