



PeopleRX: Drug Recommendation System

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8/9/2022

Metis

Client



- Reputable pharmacy brand
- Expanding online healthcare services
- Increasing consumer engagement online



Motivation

Fast and efficient medical treatment without:

1. Unpredictable painful side effects
2. Long clinical trial wait time
3. Uncertainty
4. Human error
5. Costs

Data

212,850 data points with at least 6 features

	A	B	C	D	E	F	G
1		drugName	condition	review	rating	date	usefulCount
2	206461	Valsartan	Left Ventricular Dysfunction	"It has no side effect, I take it in combinati	9	May 20, 2012	27
3	95260	Guanfacine	ADHD	"My son is halfway through his fourth weel We have tried many different medications	8	April 27, 2010	192
4	92703	Lybrel	Birth Control	"I used to take another oral contraceptive, The positive side is that I didn't have	5	December 14, 2009	17
5	138000	Ortho Evra	Birth Control	"This is my first time using any form of bir	8	November 3, 2015	10

Project Design

1

Clean Data +
Explanatory Data
Analysis (EDA)

2

Creating Top Drugs
Dataset in SQL using
RANK(),
OVER(PARTITION BY)
functions

3

Uploading Top Drugs
Dataset Into GitHub
Database (MySQL) by
hosting the dataset on
GitHub website

4

Using Streamlit to pull
in the dataset, process,
and display the top
recommended drugs
for chosen condition

5

Deploying PeopleRX
Drug Recommender
Web Application on
Streamlit Cloud



EDA Findings

- Top 6 most common medical conditions:
 1. Birth control
 2. Depression
 3. Pain
 4. Anxiety
 5. Acne
 6. Bipolar Disorder

Streamlit Web Application

PeopleRX: Top Drugs Recommender

Select the Condition

HIV Infection

Detailed Data View

	↓ reviews	drugName	condition	rating	rank
110673	86	Efavirenz / emtricitabine / tenofovir	HIV Infection	8	76
77785	86	Efavirenz / emtricitabine / tenofovir	HIV Infection	9	50
19897	86	Efavirenz / emtricitabine / tenofovir	HIV Infection	10	1
105533	84	Atripla	HIV Infection	8	73
70449	84	Atripla	HIV Infection	9	48
5883	84	Atripla	HIV Infection	10	1
124711	72	Stribild	HIV Infection	8	69
98164	72	Stribild	HIV Infection	9	60
56916	72	Stribild	HIV Infection	10	1
108332	71	Cobicistat / elvitegravir / emtricitabine / tenofovir	HIV Infection	8	69

```
mirror_mod = modifier_ob.  
set mirror object to mirror.  
mirror_mod.mirror_object =  
operation == "MIRROR_X":  
mirror_mod.use_x = True  
mirror_mod.use_y = False  
mirror_mod.use_z = False  
operation == "MIRROR_Y":  
mirror_mod.use_x = False  
mirror_mod.use_y = True  
mirror_mod.use_z = False  
operation == "MIRROR_Z":  
mirror_mod.use_x = False  
mirror_mod.use_y = False  
mirror_mod.use_z = True  
  
selection at the end -add  
mirror_ob.select= 1  
modifier_ob.select=1  
context.scene.objects.active  
("Selected" + str(modifier_ob.  
mirror_ob.select = 0  
= bpy.context.selected_object  
data.objects[one.name].select  
  
print("please select exactly  
  
-- OPERATOR CLASSES ----  
  
types.Operator):  
X mirror to the selected  
object.mirror_mirror_x"  
mirror X"  
  
context):  
context.active_object is not
```

Future Work

- Rank drugs based on both number of reviews and rating
- Add a histogram displaying different types of drugs and their review numbers for a chosen condition

Thank you!

