

BUSINESS **CONSULTING**



By Abdelrazek Rizk

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Background:

We are business consulting agency work with business owners on developing a business plan, identifying marketing needs and help in making decisions

Pharmacies chain stores in the United States

The number of community pharmacies increased by **6.3%**, from **63,752** pharmacies in **2007** to **67,753** pharmacies in **2015**

The top **25** pharmacy chain stores represent about **28,000** pharmacy locations in the U.S. and employ about **46,000** on-staff pharmacists

The problem:

One of our clients is a large drug company and want to buy one of pharmacies chain stores in the United States.

Therefore, we will provided him with statics about pharmacies chain stores .

In addition, help him to make his decisions

Resource:

Pharmacies in the United States:

https://en.wikipedia.org/wiki/Pharmacies_in_the_United_States

The availability of pharmacies in the United States: **2007–2015:**

<https://journals.plos.org/plosone/article?id=10.1371/journal.pone.0183172#sec012>

Consulting Is More than Giving Advice:

<https://hbr.org/1982/09/consulting-is-more-than-giving-advice>

Examples of Business Consultancy:

<https://www.entrepreneur.com/article/335509>

Image:

<https://www.linuxbusinessexpo.com/fed-up-with-doing-exactly-the-same-boring-factor-be-a-business-consultant/>

Data:

1. Data acquisition

i. Wikipedia Data

The most top five states. [Texas](#), [New York](#), [Florida](#) ,
[Pennsylvania](#) and [California](#) round out for pharmacy chain
information in the United States.

https://en.wikipedia.org/wiki/Pharmacies_in_the_United_States

ii. Foursquare API

I queried [Foursquare API](#) in order find venues that are most popular in each Pharmacies in the United States Pharmacy rate, latitude and longitude of each pharmacy In order to determine which pharmacy chain is the best for our clients.

iii. Csv file:

Top U.S. pharmacies ranked by prescription drugs market share in **2019**:

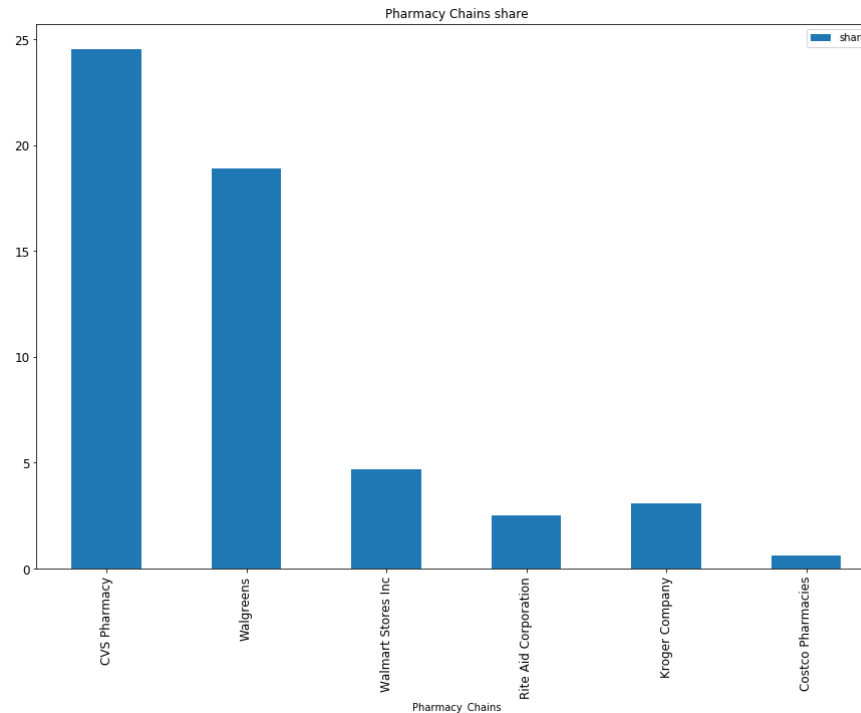
<https://www.statista.com/statistics/734171/pharmacies-ranked-by-rx-market-share-in-us/>

Pharmacy and drug store sales in the United States from **1992** to **2018** (in billion U.S. dollars):

<https://www.statista.com/statistics/197635/annual-pharmacies-and-drug-store-sales-in-the-us-since-1992/>

2. Data cleaning:

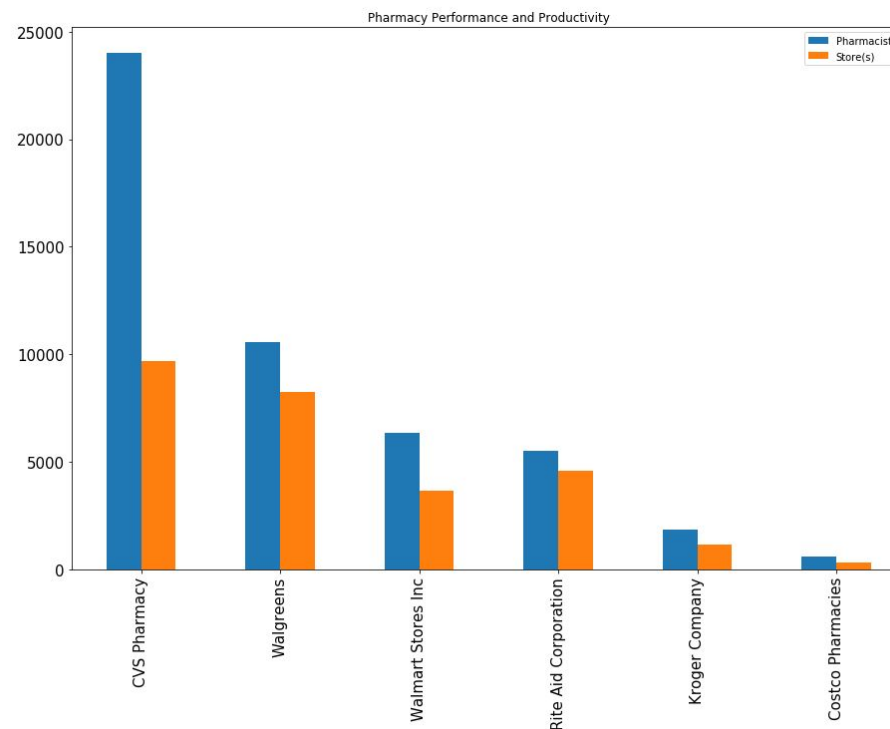
Data downloaded or scraped from multiple sources were combined (Pharmacy_Chains, Pharmacy_share)
Into one table (Pharmacy_Chains share)



3. Exploratory Data Analysis:

Creating a bar chart “Pharmacy Performance and Productivity”

To Show us if there is a relation between the number of stores to Pharmacy_Chains and the number of employees



As we see **CVS Pharmacy** their about ~**2.4** employees for each store

But if we look to the second-ranked **Walgreens** their about ~**1.2** employees for each store

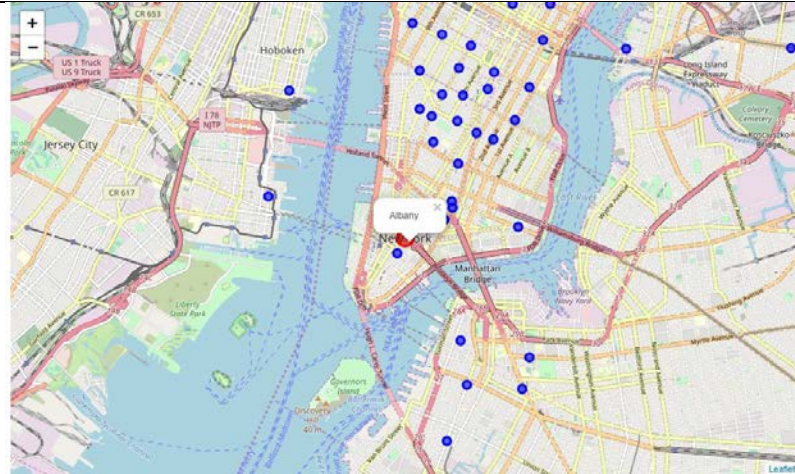
	Rank	Pharmacy_Chains	City	State	Pharmacists	Store(s)	share
CVS Pharmacy	1	CVS Pharmacy	Woonsocket	RI	24000	9700	24.5
Walgreens	2	Walgreens	Deerfield	IL	10578	8232	18.9
Walmart Stores Inc	3	Walmart Stores Inc	Bentonville	AR	6358	3646	4.7
Rite Aid Corporation	4	Rite Aid Corporation	Camp Hill	PA	5523	4608	2.5
Kroger Company	5	Kroger Company	Cincinnati	OH	1866	1156	3.1
Costco Pharmacies	12	Costco Pharmacies	Issaquah	WA	589	323	0.6

4. Foursquare Places API Analysis:

Generate map centered on the Capital of each state to show how pharmacy chain distributions in it

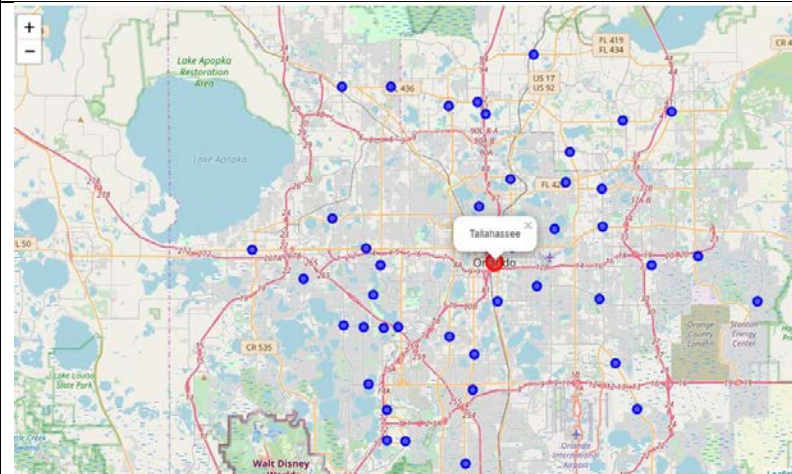
	U.S. state	Capital
I.	New York, NY	Albany
II.	Florida, FL	Tallahassee
III.	Illinois ,IL	Springfield
IV.	Pennsylvania, PA	Harrisburg
V.	Arkansas, AR	Arkansas
VI.	Ohio, OH	Columbus
VII.	California, CA	Sacramento
VIII.	Rhode Island	Providence
IX.	Texas, TX	Austin

New York, NY



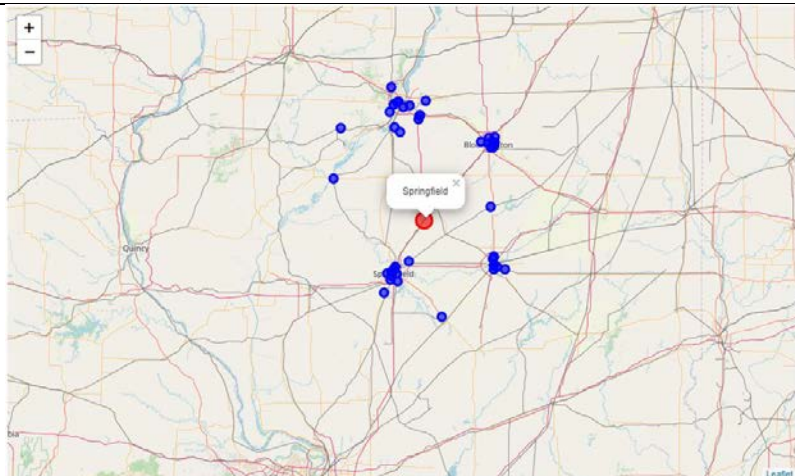
Pharmacy distributed normally North the state Capital City

Florida, FL



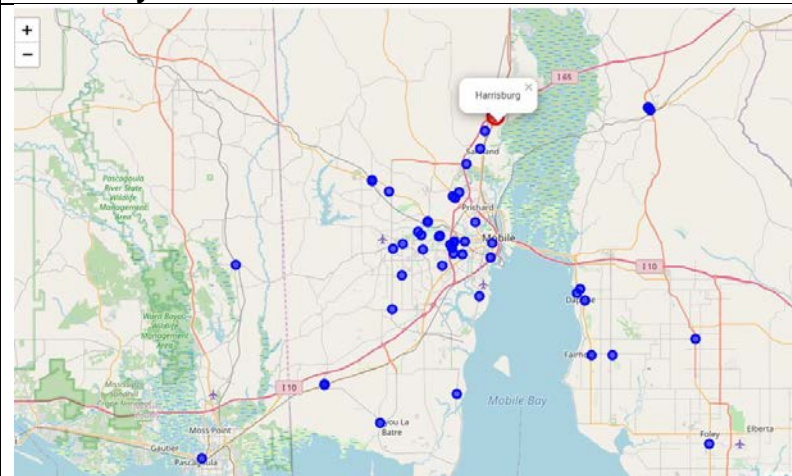
Pharmacy distributed normally around the state Capital City

Illinois ,IL



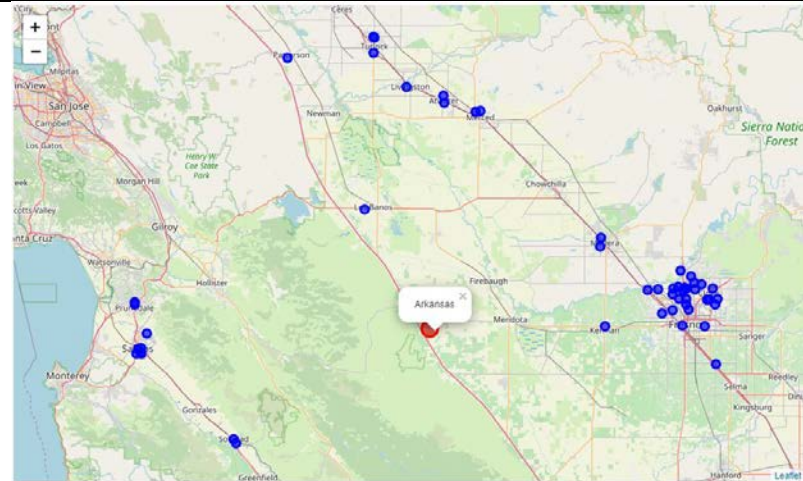
Pharmacy distributed The outskirts the state of Capital City

Pennsylvania, PA



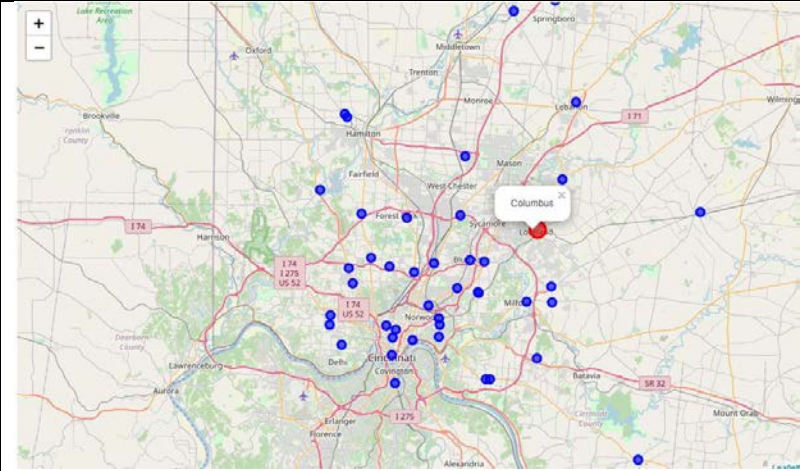
Pharmacy distributed normally South the state Capital City

Arkansas, AR



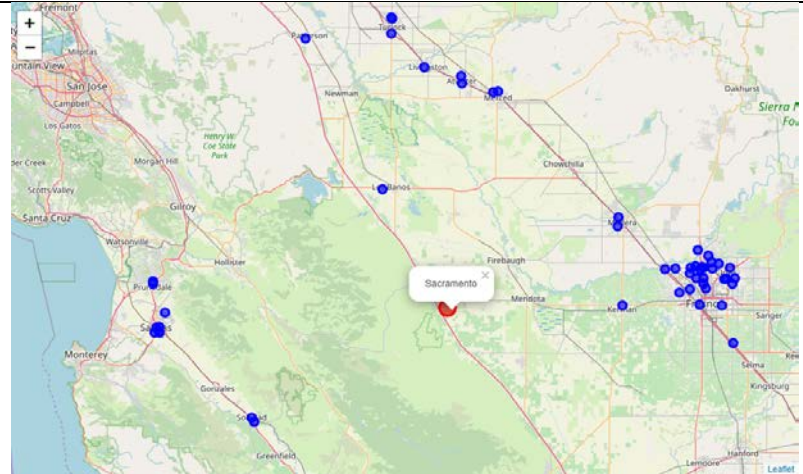
Pharmacy distributed The outskirts the state of Capital City
Notice: Arkansas, Sacramento and Austin almost the same

Ohio, OH



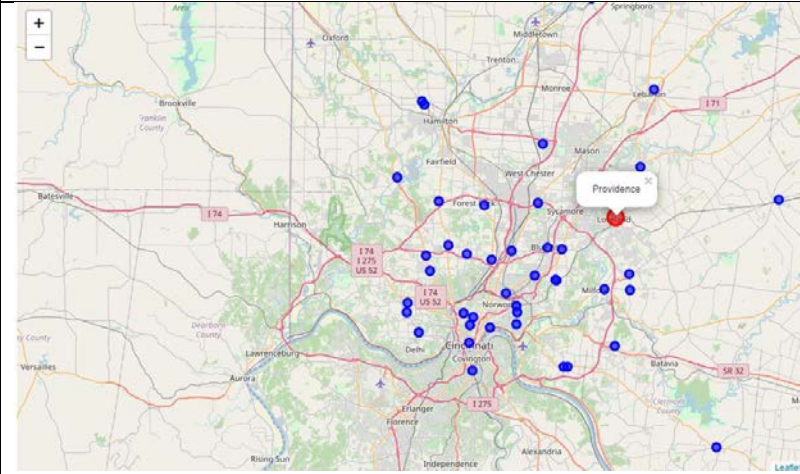
Pharmacy distributed normally around the state Capital City

California, CA



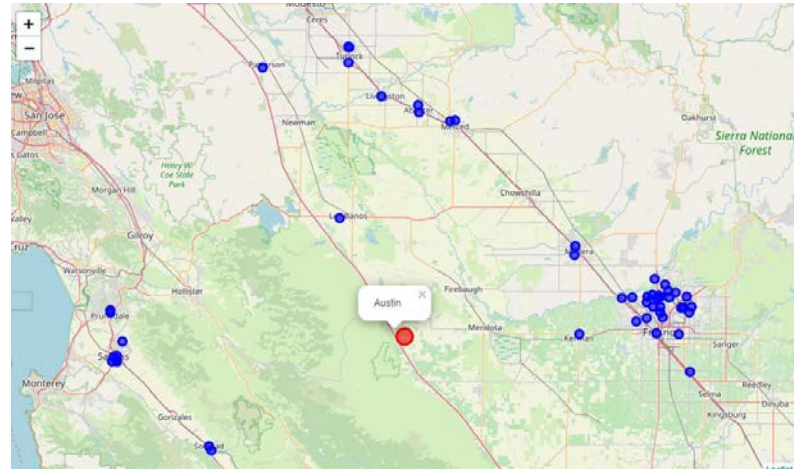
Pharmacy distributed The outskirts the state of Capital City
Notice: Arkansas, Sacramento and Austin almost the same

Rhode Island



Pharmacy distributed normally around the state Capital City

Texas, TX



Pharmacy distributed The outskirts the state of Capital City
Notice: Arkansas, Sacramento and Austin almost the same



5. Conclusions:

In that case for given recommendation to our client about

The best choice to make an offer to a pharmacy chain

We use data visualization, data mining, and Geo Capital maps

To give the best solution

We found that

CVS Pharmacy chain had employee **24,000** Pharmacists to run **9,700** Store(s) about **~2.4** Pharmacists/store

And has **24.5%** market drug sales share about **68.6 billion** U.S. dollars in **2018**

In the other side **Walgreens Pharmacy** chain had employee **10,578** Pharmacists to run **8,232** Store(s) about **~1.2** Pharmacists/store

And has **18.9%** market drug sales share about **\$54 billion** U.S. dollars in **2018**

And we search about additional information about market value

<https://www.gobankingrates.com/money/business/how-much-is-walgreens-worth/>

<https://www.gobankingrates.com/money/business/how-much-is-cvs-worth/>

CVS Pharmacy chain Net Worth **\$152.2 billion** U.S. dollars

Walgreens' Pharmacy chain Net Worth **\$105.6 billion** U.S. dollars in **2018**

6. Feedback and Recommendations:

We will give our client to make his offer to **Walgreens Pharmacy** chain as it is less than **CVS Pharmacy** in Net Worth

By ~**\$50 billion** U.S. dollars

And our client yes he will run **1,468** stores less than **CVS Pharmacy** but he will saving wages for **13,422** Pharmacists

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