

Data Analytics Portfolio

Rekha Rani

- **Email:**
rekhabadhan278@gmail.com
- **LinkedIn:** [linkedin.com/in/rekha-rani-6977bb24b](https://www.linkedin.com/in/rekha-rani-6977bb24b)
- **GitHub:**
<https://github.com/Rekha3124>



About Me

Professional Background

- Data analyst with experience transforming complicated data into meaningful insights .
- Make data driven decisions by cleaning, analyzing and interpreting big datasets to find important insights and creating interactive dashboards and reports.

Education

- BCA (Bachelor in Computer Applications)
- MCA (Masters in Computer Applications)
- Data Analytics Graduate
- Data Analytics – CareerFoundry(Ongoing)

Skill & Tools

- SQL, Python, Power BI, Tableau
- Data visualization, statistical analysis, and predictive modeling

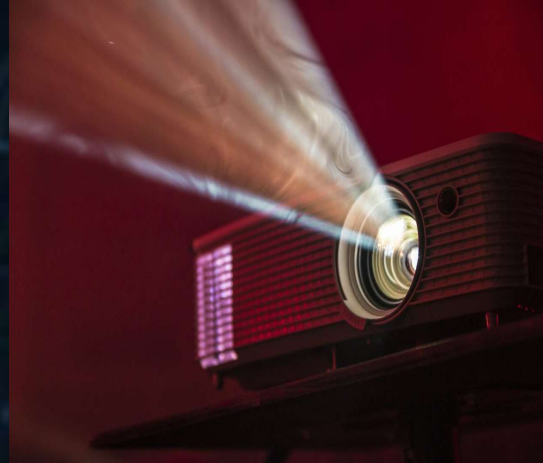
Goals

- To improve my analytical abilities and to provide my team and clients even more value, I'm constantly keen to investigate new technologies and approaches.

Project Overview



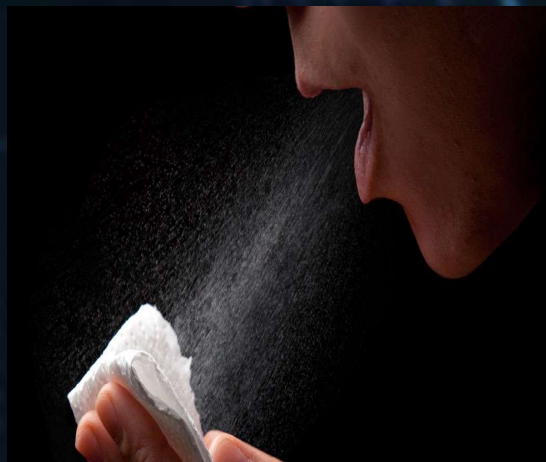
GamesCo



Rockbuster Stealth



Pig E.Bank



Influenza Deaths



Instacart

GameCO

Game Co, a recently founded video game firm, wants to use data analysis to evaluate market trends, improve strategic choices, and spur expansion in the most resilient industries.

Data

The [VG Chart](#) dataset covers global video game sales across platforms, regions, and genres.

About Dataset

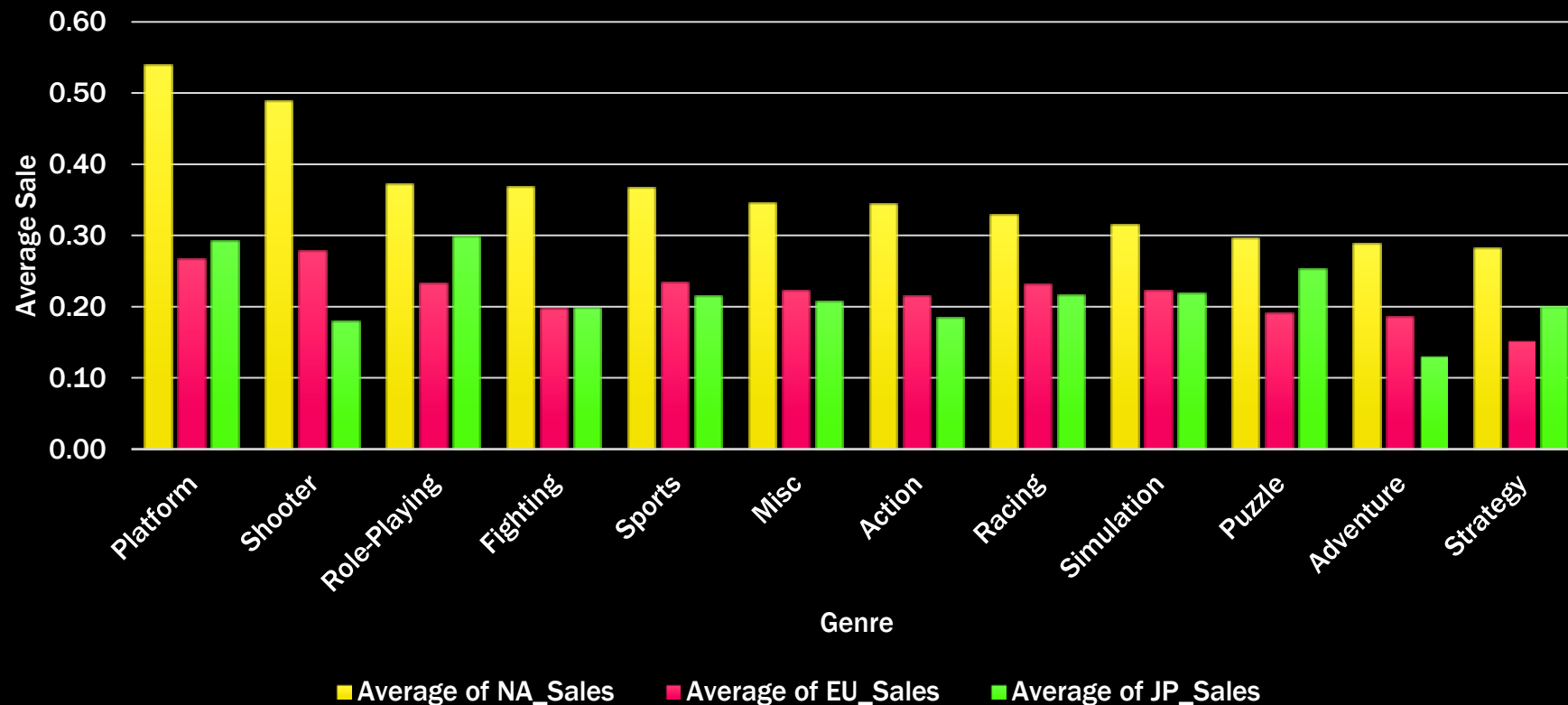
I have access to the October 2016 dataset of GameCo executives. My analysis indicates that there are regional differences in the behavior of video game sales. As for the sale, GameCo currently thinks that the maximum sale happened in North America 473.05 millions in the year 2008 and the minimum sale happened in Japan which was 0.05 millions in the year 2017

Methods

- Organizing and refining data using Excel (grouping, sorting, filtering)
- Cleaning and preparing data for analysis
- Conducting descriptive analysis to uncover trends
- Visualizing insights through charts and graphs

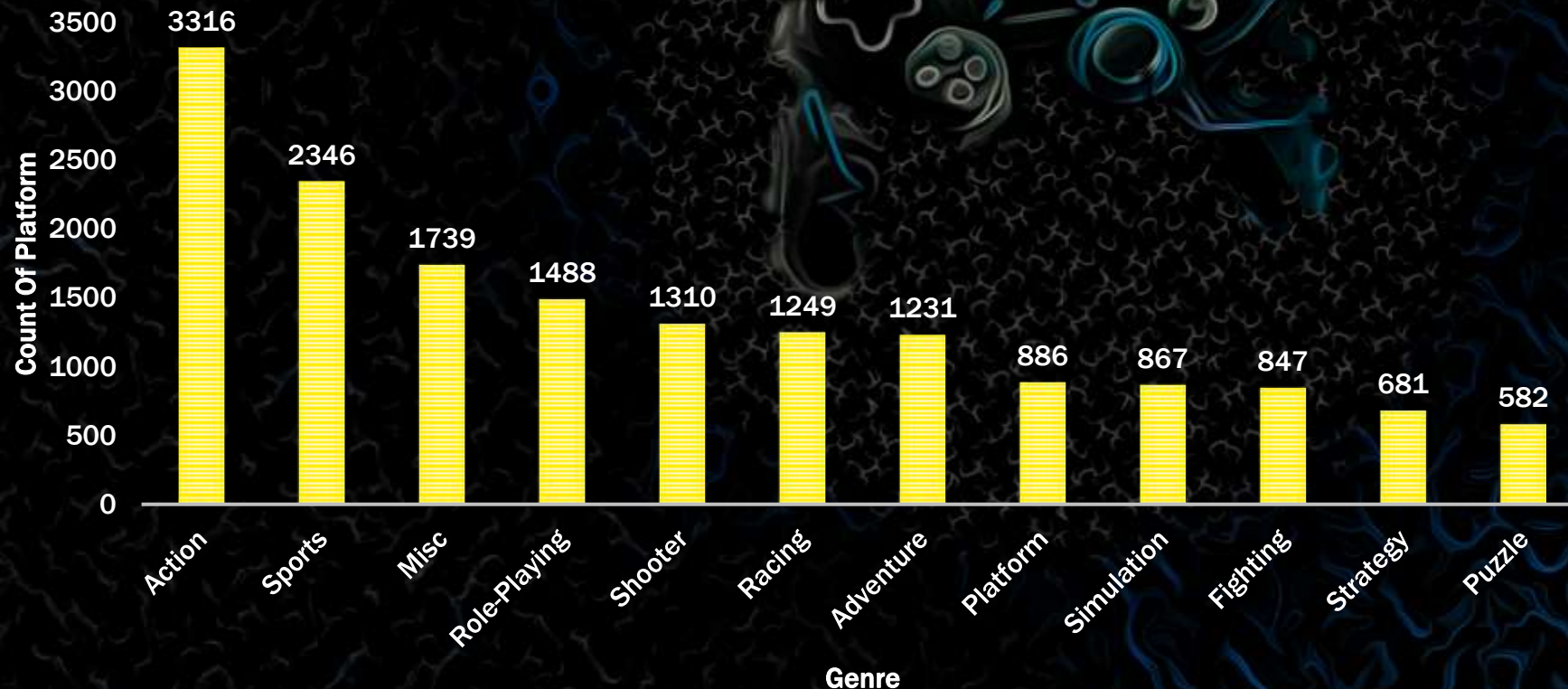
Video Game sales among three regions

According to the following graph, NA_Sales remained the highest across all genres when compared to other regions. Sales in the EU and JP were varying. Shooter, Sports, Action, Adventure in Europe, sales were high, and Platform, Role-Playing, Puzzle, Strategy in Japan, sales were high.



Video Game sales among different genre

The graph below illustrates the declining trend of various genres played across various platforms. It is evident from this representation that action is the most popular genre among consumers, and it is typically played on 3316 platforms. The least popular genre, however, is puzzle games, which are available on only 582 platforms.



Recommendations

- Pay attention to the titles with the best sales figures. For example, 2016–2020 were the years with the highest NA sales. At this time, shooter games were increasingly popular. This kind of game can be published by GameCo.
- Japan earns very little money. GameCo can therefore establish a reasonable spending limit for games.
- GameCo can make more realistic and appropriate sales targets for the market by incorporating regionally specific data into its forecasting models.
- GameCo can concentrate on the platform that people use the most and release games on it

GitHub :

<https://github.com/Rekha3124>

Influenza Season

To help a medical staffing agency that provides temporary workers to clinics and hospitals on an as-needed basis.

Data

[US Census Data Set](#)

Includes U.S. county and state population (2009–2017).

[CDC Influenza Deaths Data Set](#)

Includes monthly U.S. influenza death counts (2009–2017).

Tools

- Excel
- Tableau

Methods

- Organizing/refining data
- Cleaning/preparing data
- Conduct descriptive analysis
- Visualize the data

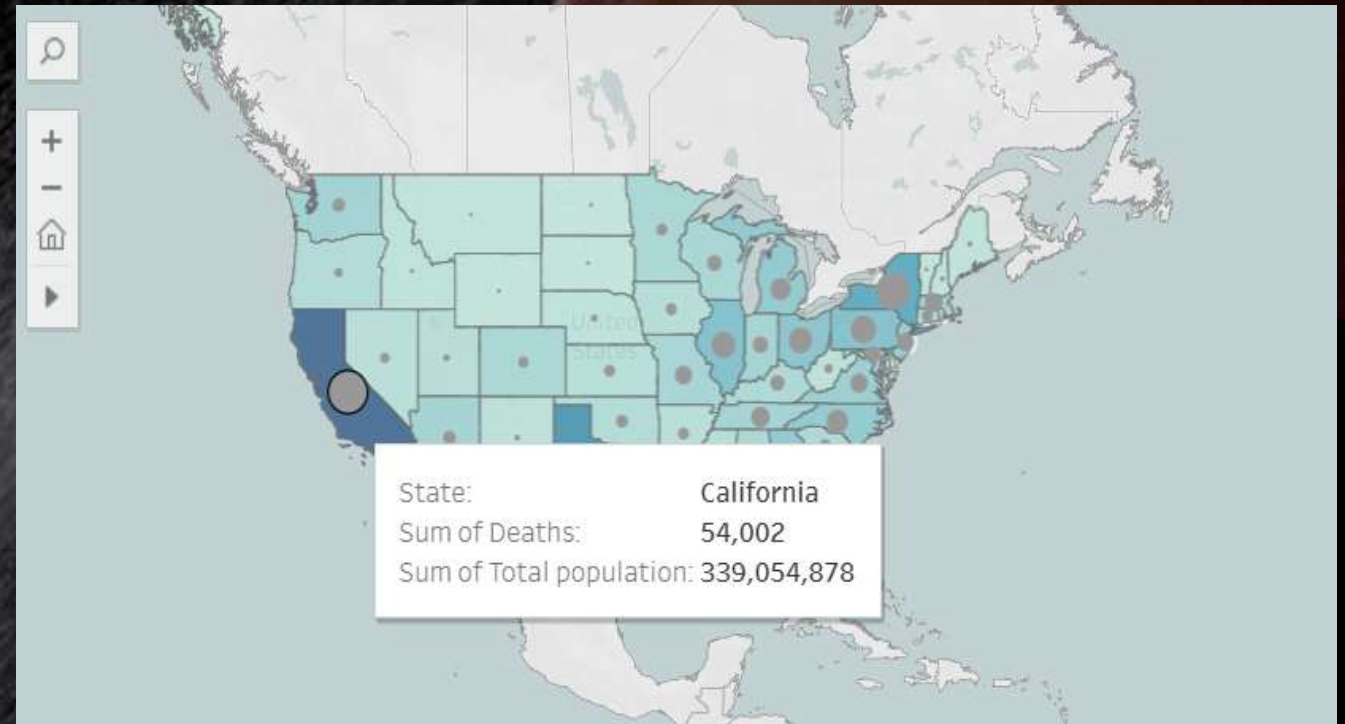
Overview

Motivation: The United States has an influenza season where more people than usual suffer from the flu. Some people, particularly those in vulnerable populations, develop serious complications and end up in the hospital. Hospitals and clinics need additional staff to adequately treat these extra patients. The medical staffing agency provides this temporary staff.

- **Objective:** Determine when to send staff, and how many, to each state.
- **Scope:** The agency covers all hospitals in each of the 50 states of the United States, and the project will plan for the upcoming influenza season

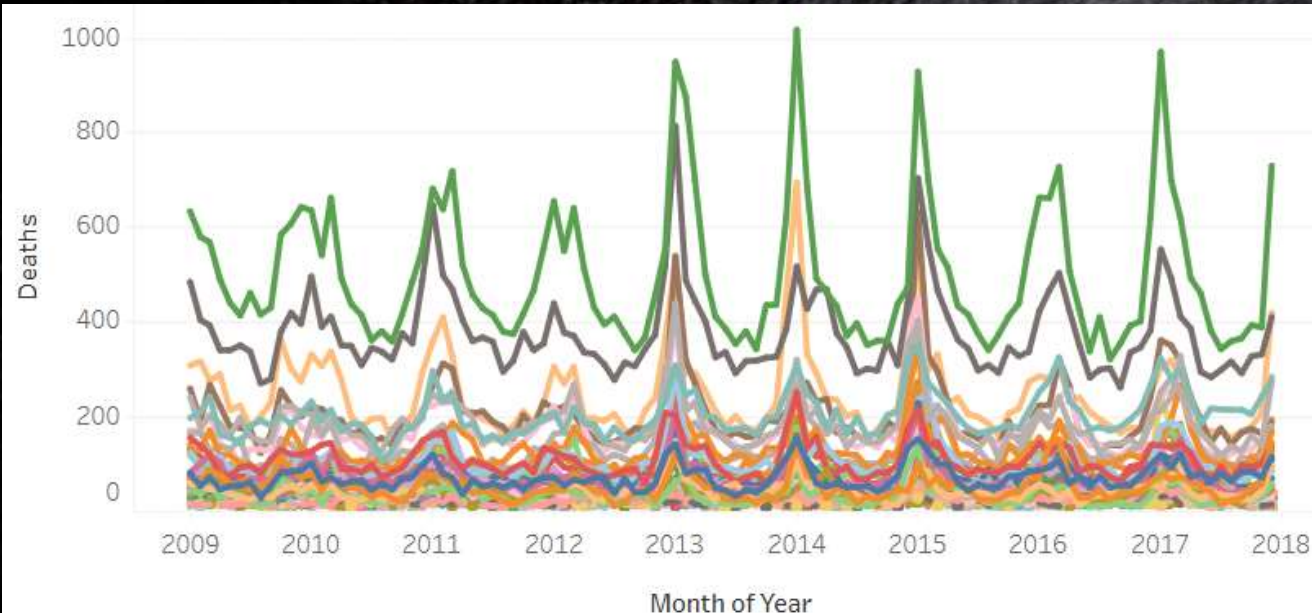
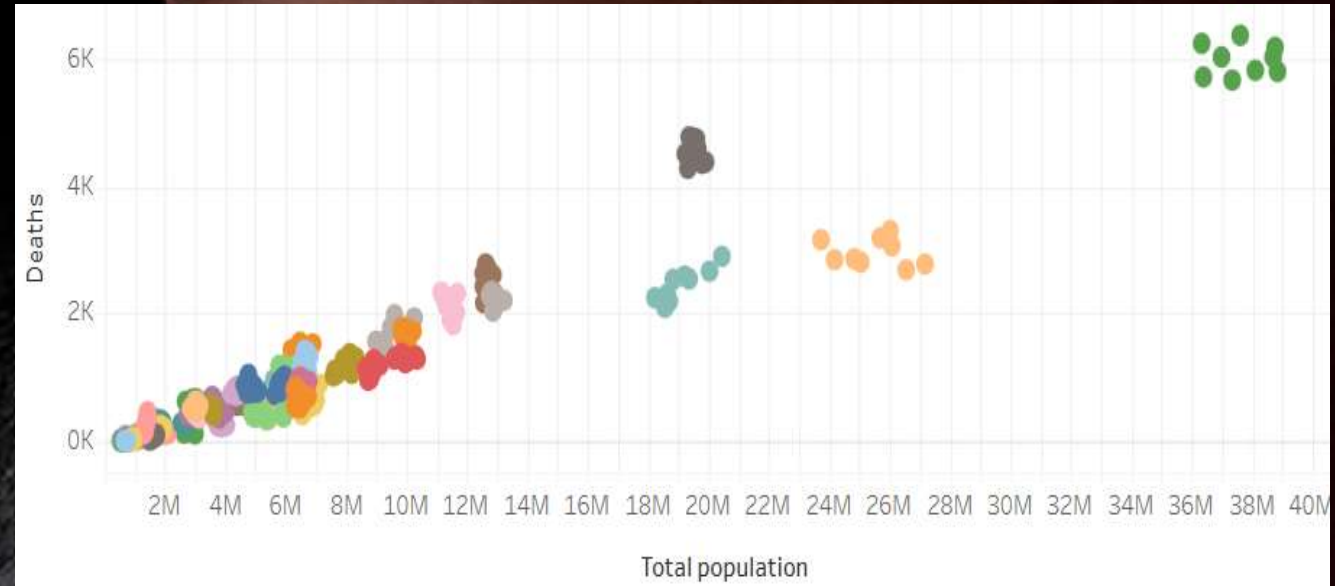
Combination map of US deaths and population

The map shows the total population and total number of deaths in US. The darkest color indicates an area that is densely populated, while the lightest color indicates an area that is sparsely populated. The largest circle indicates the most no. of deaths, while the smallest one reflects the fewest. California is highly populated and high death rate.



Bubble Chart: Most vulnerable population

The most vulnerable population was revealed by this representation, which shows the entire population and the total deaths. This indicated that those 65 and older are more susceptible to contracting the flu.



Line Chart: Showing the Seasonality

The total no. of deaths that take place in the US year is depicted in this chart. Compared to the other states, California has the most fatalities between 2013 to 2018 in the month of January.

Recommendations

- People over 65 are the most susceptible group. Therefore, it is advised that they receive additional support and care in order to combat the flu.
- According to the figure, January is busiest time of the year for flu cases. Thus, the employees ought to be prepared for the winter months.
- California is the state where the greatest no. of deaths are occurring, followed by Texas and New York. In these crowded regions, the most employees should be deployed.

Tableau Workbook:

<https://public.tableau.com/app/profile/rekha.rani6049/vizzes>

Rockbuster Stealth

Rockbuster Stealth LLC is a movie rental company that used to have stores around the world. Facing stiff competition from streaming services such as Netflix and Amazon Prime, the Rockbuster Stealth management team is planning to use its existing movie licenses to launch an online video rental service in order to stay competitive.

Data

Data set that contains information about Rockbuster's film inventory, customers, and payments, among other things

Objective

Provide the management team with useful information
To direct the planned introduction with their new online video Rental service.
To improve decision making and marketing positioning,
Examining important variables like revenue, client distribution,
and sales trend.

Tools

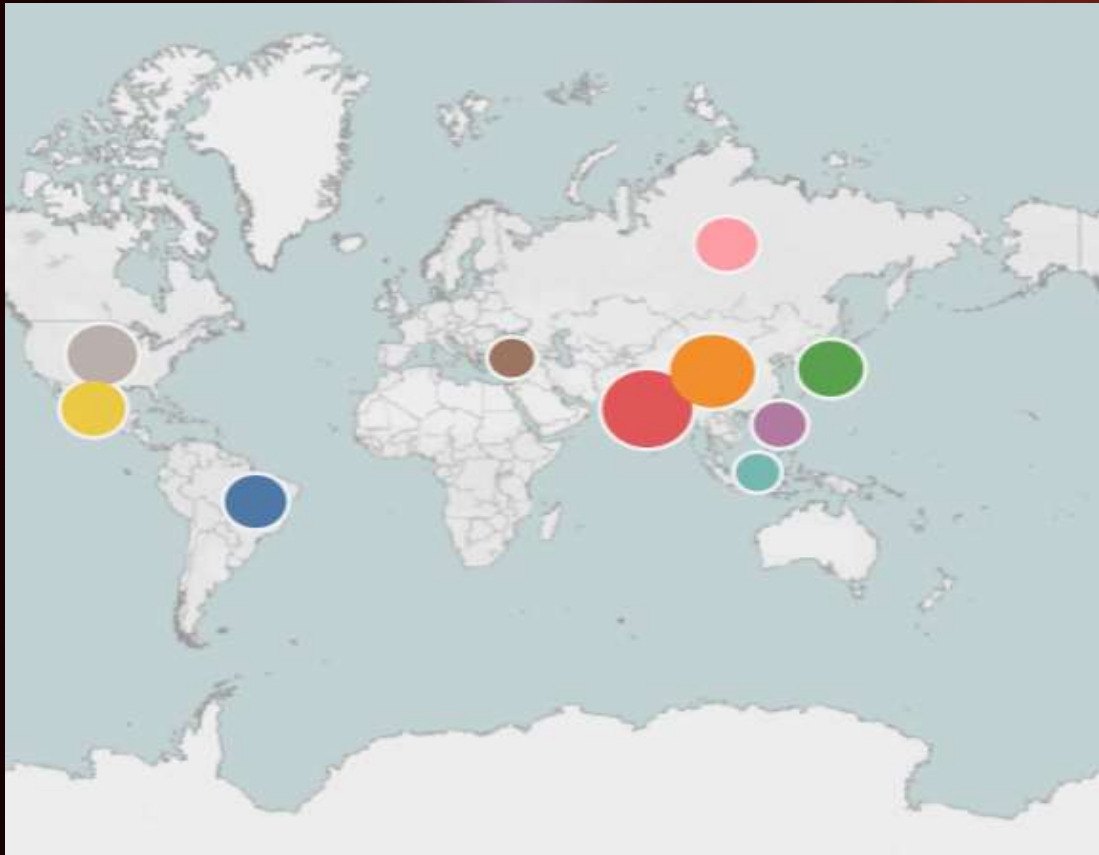
- Tableau
- Postgres

Methods

- Relational databases (SQL) for data management
- Database querying for extracting insights
- Filtering, cleaning, and summarizing data
- Joining tables for comprehensive analysis
- Subqueries and common table expressions (CTEs)

Top countries by customer count and revenue

Rockbuster's customers are based in India, China, US. The map shows that India has 60 consumers, China has 53 and US has 36.



The figure illustrate the no. of customer by revenue. Once more, the country with more clients and high revenue is India. The country with least revenue and customer count is American Samoa.

India 1,421 6,033	China 1,296 5,247	United States 873 3,694	Japan 748 3,122	Mexico 718 2,985
Brazil 681 2,919	Indonesia 331			
	Argentina 320			
Russian Federation 638 2,766	Nigeria 308			
Philippines 530 2,220	Taiwan 290			
Turkey	Iran			

Customers who paid highest amount

The bubble chart displays the cities together with the names of the customers , their city, the amount they have spent. The highest paid person in Saint-Denis is Eleanor(211.6).

The goal of this insight is to provide some alluring offers, like discounts and other incentives, to those who are contributing to the revenue gain.



Recommendations

- The best selling and more profitable films are those rated PG-13.
- The nations with the largest number of customers and high revenue contributions are China(53), India(60), United States(36).
- According to these findings, the largest market for movie sellers and the one where they can make money is Asian Countries that are India(6035), China(5251), South Korea(528).
- Based on the number of customers, London is the city that pays the most revenue(174.5) and by revenue Eleanor is the high amount payer(211.5) in Saint-Denis.

Github: <https://github.com/Rekha3124>

Instacart

Instacart is an app-based online grocery store. Although Instacart's sales are already excellent, they would like to learn more about their sales trends in order to increase them.

Methods

- Data wrangling & subsetting
- Data merging & variable derivation
- Data grouping & aggregation
- Data visualization using Python

Data

Customer dataset from CareerFoundry

Instacart online shopping dataset from 2017

Tools

- Python
- Excel

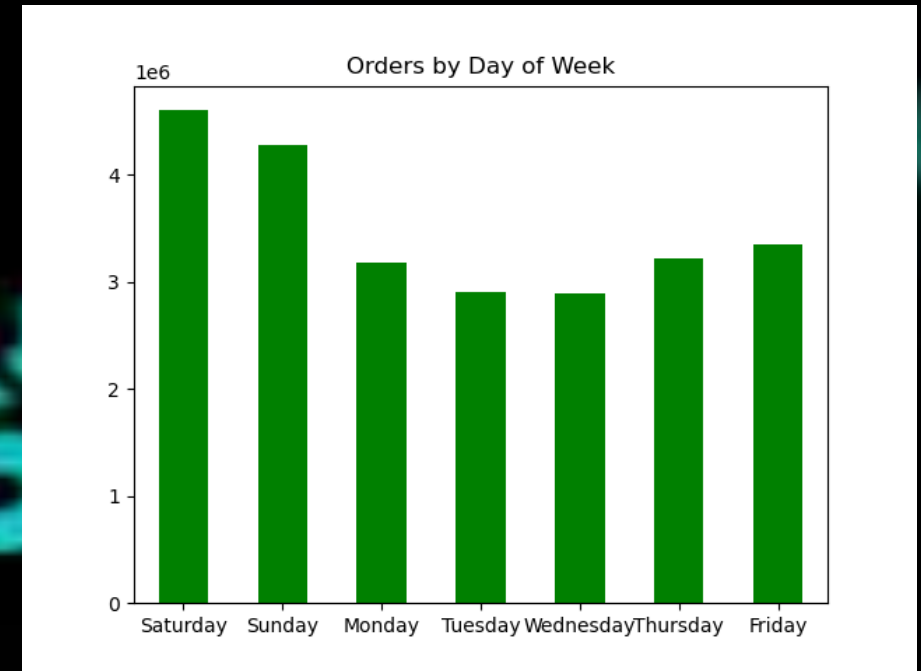
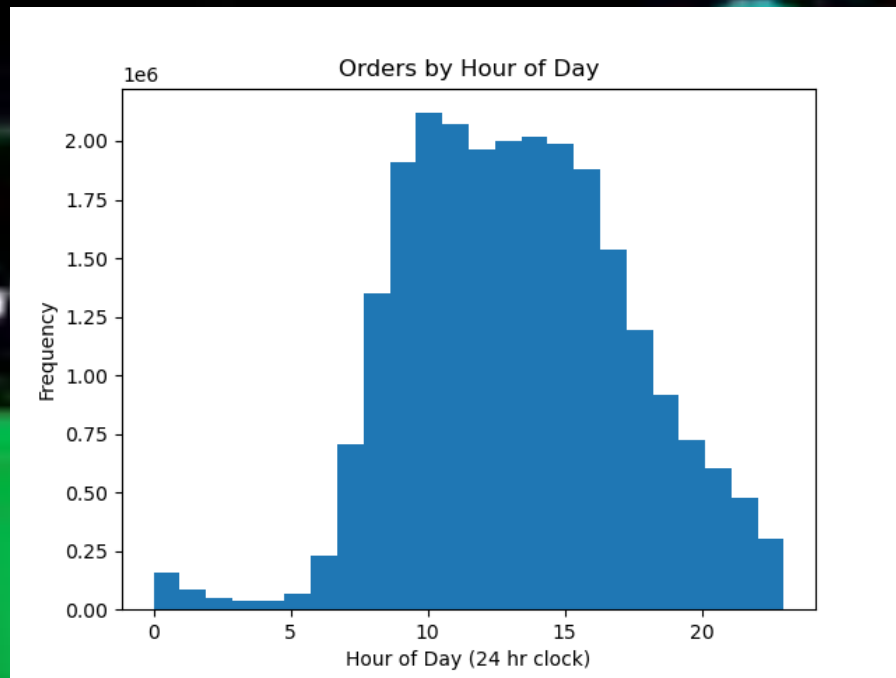
Objective

To improve ad timing and maximize product marketing technique, identify peak, and low order times.

Analyze consumer buying patterns, taking into account demographic, regional variance, and loyalty. To improve targeted market campaigns.

Busiest days of the week and hours of the day

Saturday and Sunday are the busiest day of the week. Tuesday and Wednesday are the least busy days of the week.

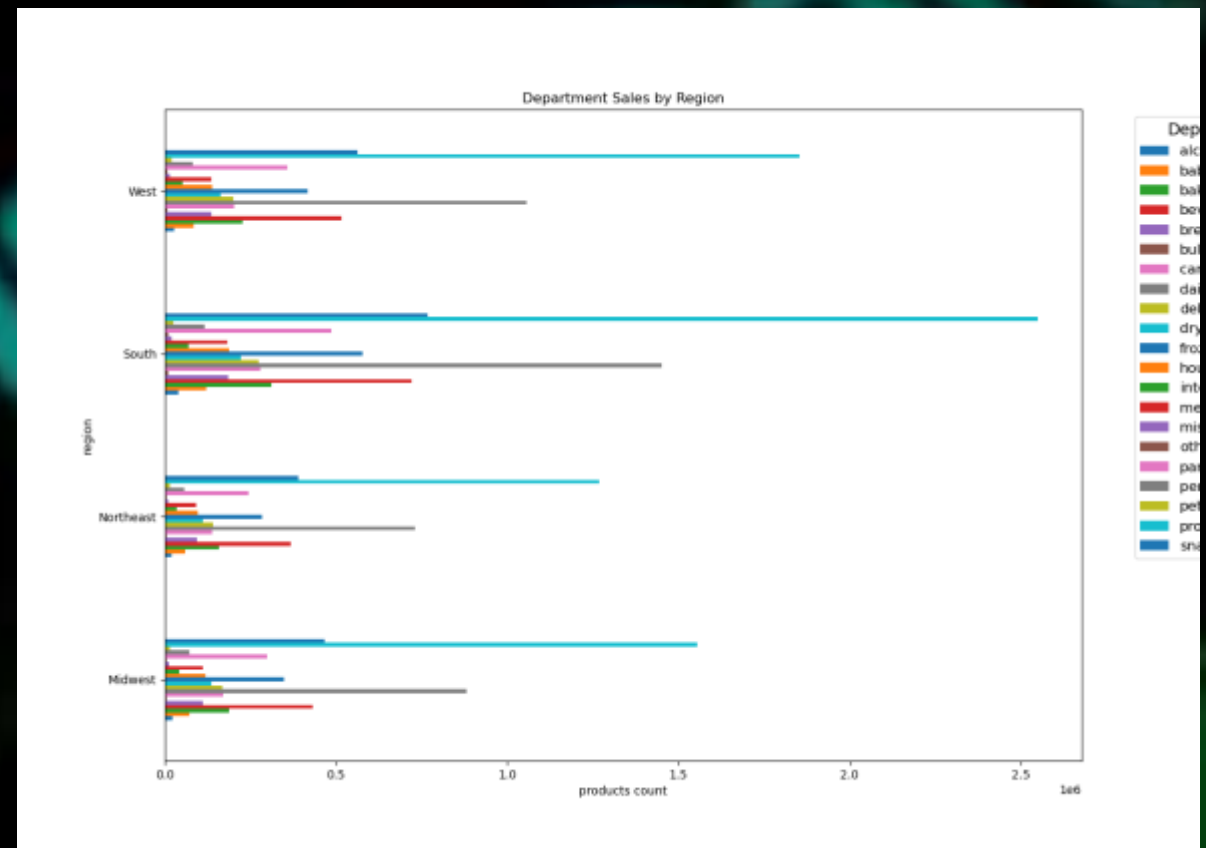


Most orders are between 9am and 4pm with a peak at 10am to 11am

Department sale by region

This image essentially shows that customers' ordering habits differ from one another. The South has the highest sales, for example, followed by the Midwest, West, and Northeast.

Furthermore, there are regional trends that are nearly universal, such as the popularity of produce, dairy products, and snacks across all four regions.



Recommendations

- Since the middle of the week is the least busy, target those days with promotions and coupons to increase sales during those periods.
- Have a lot of discounts and coupons. target morning cereals, packable lunches, and other common family "what's for dinner" items. Market luxury goods to those over 40 who have high incomes.
- Although these differences are quite small, on the order of magnitude of 10–20 cents, sales are greater in the morning and on the weekend. There are no recommendations based on this discovery because the little variation appears to be nearly statistical in character.

Pig E.Bank

Pig E.Bank is a multinational financial services provider that offers creative and effective services to people who utilize their goods and services to launder money.

Objective

- Use a decision tree model to pinpoint the main causes of client loss.
- Make suggestions for how to increase client retention.

Tool

- Excel
- Pivot Tables

Data

Data provided by CareerFoundry

Methods

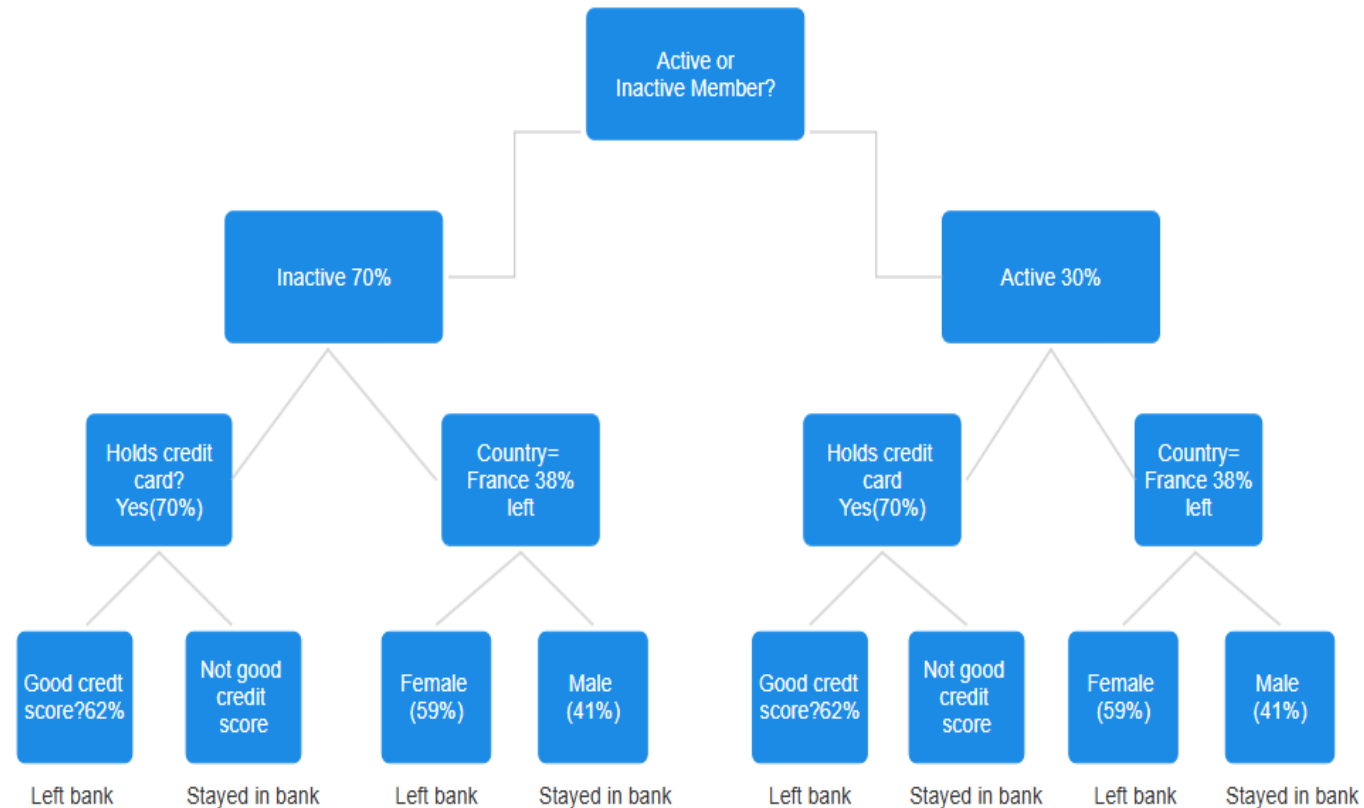
- Exploratory Data Analysis
- Data Mining Techniques
- Data Cleaning & Consistency Checks
- Data Modeling
- Predictive Analysis (e.g., Linear Regression)

Statistics for who left the bank

Upon examining the bank data, I discovered that 70% of the individuals had good credit scores and were inactive. The majority of them are from France, where women make up the majority and their pay ranges from 0 to 50,000.

Inactive members	70%	
Credit score	Good	
country	France	
Salary	0-50000	
Gender	Females	

Decision Tree



- Indicating if a member is active or not.
- Verify whether they have a credit card and their credit score if they are inactive.
- If active, verify their French nationality and credit card status.
- Included are the genders of people departing France.

Recommendations

- **Promote several items and account activities among dormant users to boost engagement.**
- To increase retention and match offerings with consumer needs, cross-sell extra products to clients who purchase less things.
- Create customized loyalty programs and modify tactics for older, well-balanced clientele.

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THANK YOU

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