



UNAZA ALI

DATA ANALYTICS

PORTFOLIO

Explore My Work:



About Me

I am a data-driven professional with a strong background in logistics, customer service, and data analytics, bringing together years of hands-on experience across diverse roles and industries. Currently, I am enhancing my expertise through the CareerFoundry Data Analytics Program (2025), where I've gained practical training in Python, SQL, Tableau, and Excel—applying analytical techniques to solve real-world challenges.

Beyond my professional journey, I'm also a proud mom, balancing career growth with raising a family. This dual role has shaped me into someone who thrives under pressure, manages time effectively, and leads with empathy. I believe being a parent has strengthened my problem-solving, adaptability, and communication skills—qualities that I bring into every project and collaboration.

Professional Background

Apple Inc. – Material Handler 3

Managed logistics, inventory, and warehouse operations with accuracy and speed, ensuring smooth workflows and timely delivery.

Customer Service Specialist – U.S. Companies

Resolved client issues, handled service queries, and built strong customer relationships by delivering reliable solutions and support.

Education

ICS – Pakistan

Studied Computer Science, gaining early programming experience in C and C++.

Bachelors in Economics – Pakistan

Developed strong analytical and statistical skills through economics and quantitative coursework.

CareerFoundry – Data Analytics Program (2025)

Hands-on training in Python, SQL, Tableau, and Excel, applying data analysis techniques to real-world projects

Skills

- Data cleaning, validation, and visualization
- Analytical thinking and problem-solving
- Regression, clustering, and forecasting
- Effective communication and team collaboration
- Time management and multitasking (strengthened as a working mom)



MY PROJECTS

Instacart

Python based exploratory analysis of consumer behavior and trends for better segmentation and targeted marketing

Rockbuster Stealth LLC

SQL based analysis for an international video rental service to help develop a data driven company strategy

Influenza Season in the US

Creating a national medical staff distribution plan based on historical death and vaccination trends in the United States

GameCo.

Analysis of global sales and consumer trends in the gaming industry

Pig E. Bank

Predictive analysis of customer retention and risk assessment for a global finance company



INSTACART

Project Overview:

Objective:

To perform an exploratory data analysis of Instacart's datasets to uncover key customer insights and recommend strategies for improved segmentation and targeted marketing campaigns.

Project Components:

- Business Overview
- Data Sources & Documentation
- Reference: Data Dictionary

Data Limitations:

- The dataset is limited to transaction data from 2017 only.
- Demographic details are limited to income level, age, and marital status

Tools & Techniques Applied:

- Data Cleaning and Structuring
- Merging and Exporting DataFrames
- Creating New Analytical Variables
- Aggregation and Grouping for Trend Analysis
- Excel-Based Reporting for Presentation



TOOLS USED



ANALYTICAL WORKFLOW

- **Data Preparation & Cleaning**

Verified data for accuracy and consistency. Addressed nulls, duplicates, and outliers, and explored summary stats to understand the structure

- **Generating Custom Variables**

Created new columns and analytical flags using logical conditions, loops, and custom functions to uncover patterns and refine segmentation.

- **Data Visualization & Reporting**

Used Matplotlib and Seaborn to design meaningful visualizations. Results were compiled and presented in Excel for stakeholder reporting.

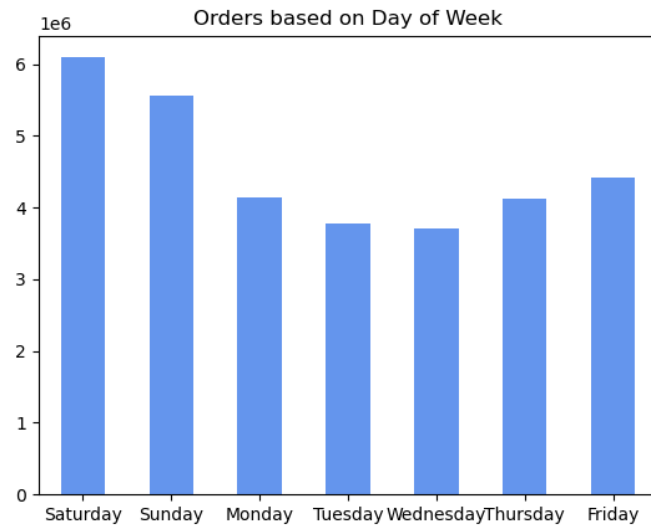
- **Grouping & Aggregation**

Applied grouping techniques to summarize behaviors by customer type, frequency, and spending. Used these insights for customer profiling.

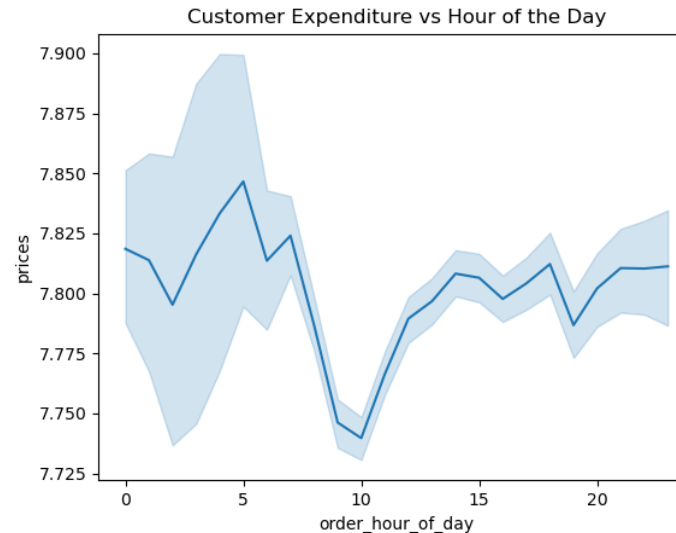


SALES ANALYSIS

WHEN DO CUSTOMERS ORDER THE MOST AND SPEND THE MOST?



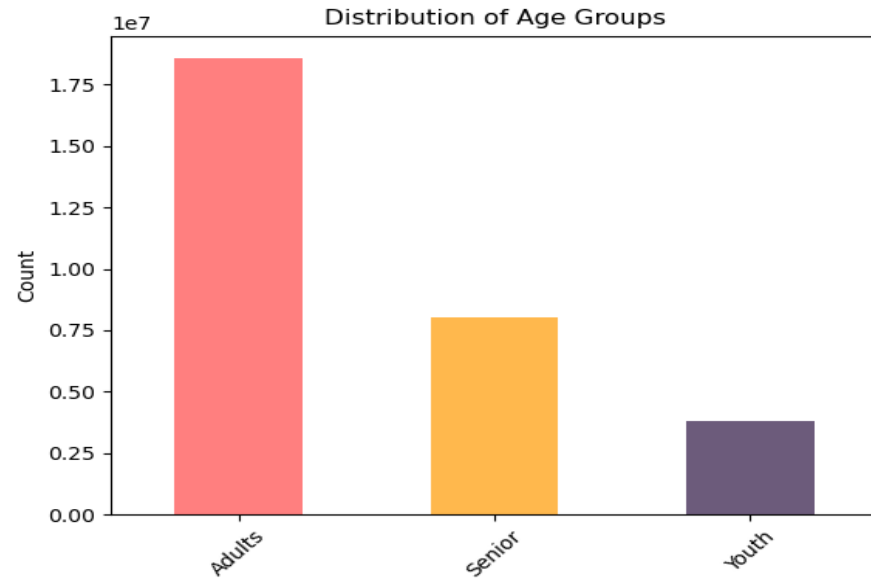
The highest order volume occurs on Sundays and Mondays, followed by Saturday. The lowest activity is seen on Tuesdays and Wednesdays.



Majority of orders is made during the day between 9am and 5pm, i.e., during working hours for most people. Very few orders are made at night, between midnight and 5am.



CUSTOMER DEMOGRAPHICS OVERVIEW

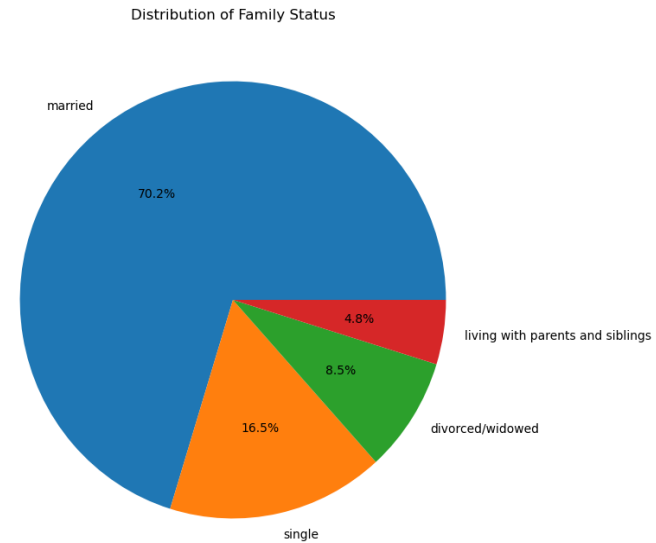


Most Instacart users fall into the adult age group, with fewer senior and youth users.. This insight helps tailor marketing strategies and product recommendations based on age-based preferences.

```
# Verify the Age Group Variable
Count_AgeGroup = Updated_df['Age Group'].value_counts(dropna = False)
```

Count_AgeGroup

```
Age Group
Adults    18561178
Senior     8049307
Youth      3793124
Name: count, dtype: int64
```



A large portion of users are *married* (70.2%), followed by *single* individuals and those who are *divorced/widowed*. Knowing family structure supports targeted communication and personalized offers—such as bulk promotions for families or convenience-focused items for singles.

```
# Check value counts for Family Status
FamilyStatus = df['Family Status'].value_counts(dropna = False)
```

FamilyStatus

```
Family Status
married      22347970
single       5240308
divorced/widowed 2714994
living with parents and siblings 1514919
Name: count, dtype: int64
```

RECOMMENDATIONS BASED ON INSIGHTS

Launch Weekend Campaigns

Since order volume is highest on **Saturdays and Sundays**, Instacart should introduce weekend-only promotions, discounts, or loyalty perks to drive repeat purchases.

Target Married Adults with Family Bundles

With **70% of users being married** and a majority in the **adult age group**, Instacart can offer family-focused bundles, meal kits, or multi-buy discounts to align with their household needs.

Optimize Daytime Promotions

Most orders are placed between **9 AM and 5 PM**. Ads, push notifications, and email campaigns should be scheduled during these hours for better engagement.

Personalize Offers for Single or Elderly Customers

Introduce convenient or smaller-pack deals for **single users** and **seniors**, such as quick meals, lower-quantity items, or curated healthy bundles.



ROCKBUSTER STEALTH LLC

Project Overview:

Objective:

To analyze market trends, customer behavior, and movie performance to develop an optimized digital streaming strategy for Rockbuster.

Project Components:

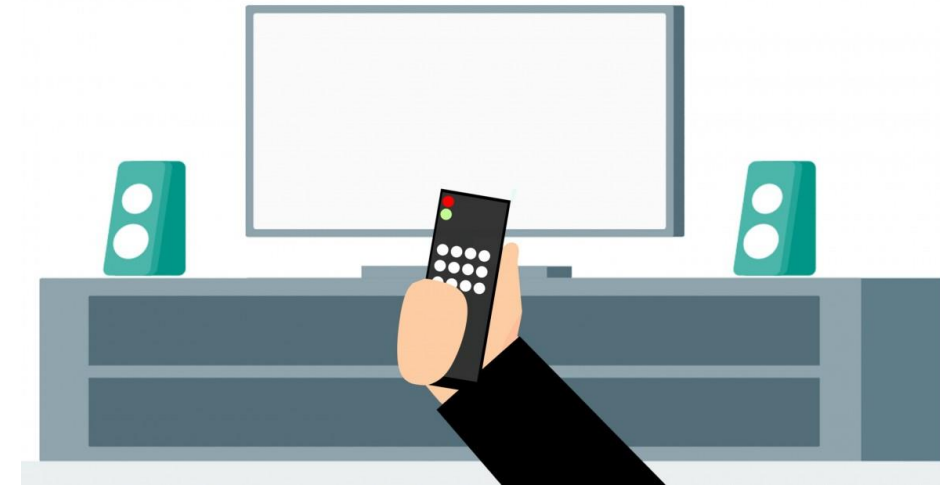
- Project Introduction & Business Context
- Data Extraction & SQL Analysis
- Visual Insights via Tableau Dashboard

Data Limitations:

- Data is based on historical rental data (fictional company)
- Demographics limited to age, income, and region only

Tools & Techniques Applied:

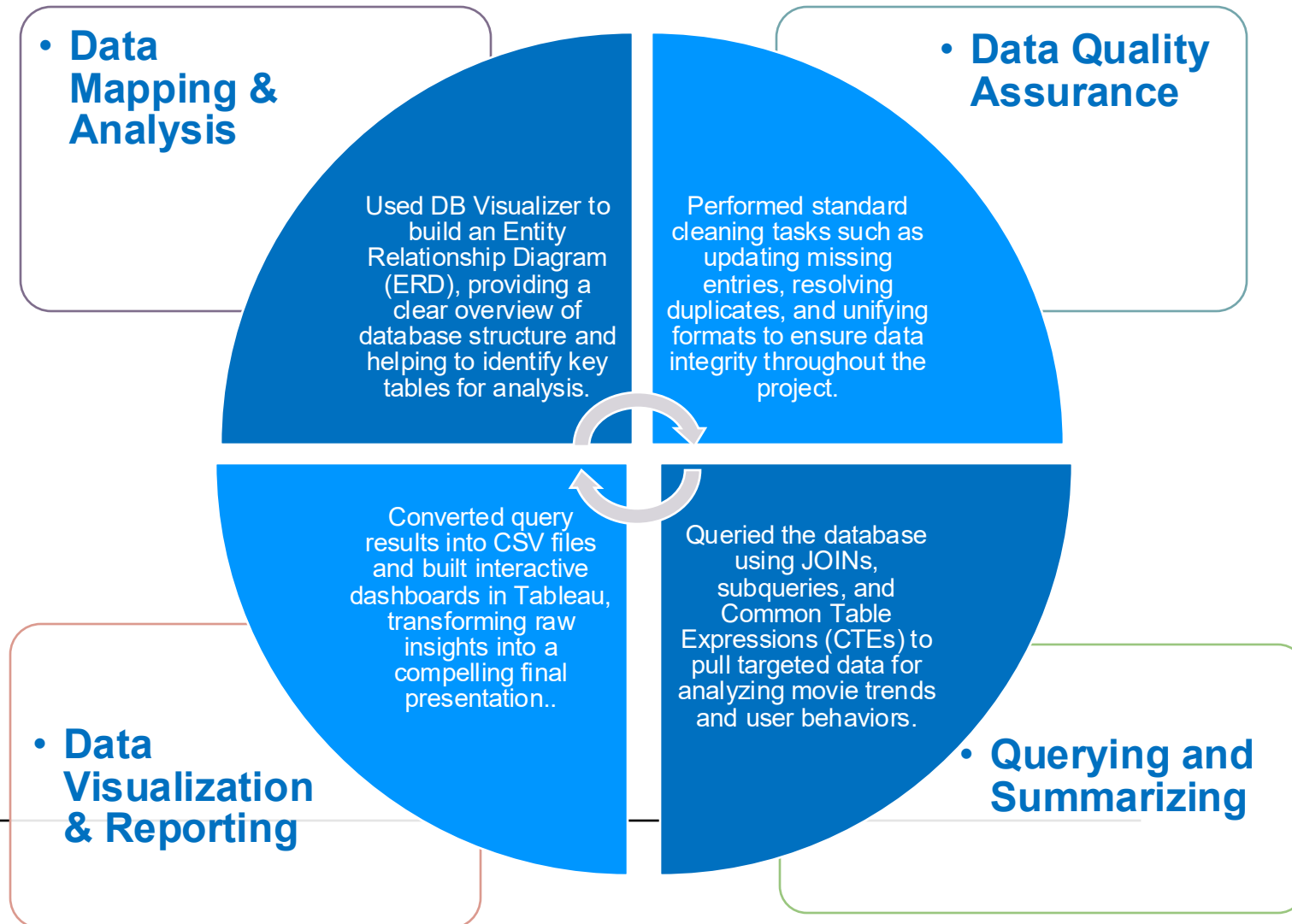
- SQL Querying for Data Extraction
- Trend Identification through Tableau Dashboards
- Regional Customer Segmentation
- Streaming Strategy Development Based on Insights



TOOLS USED

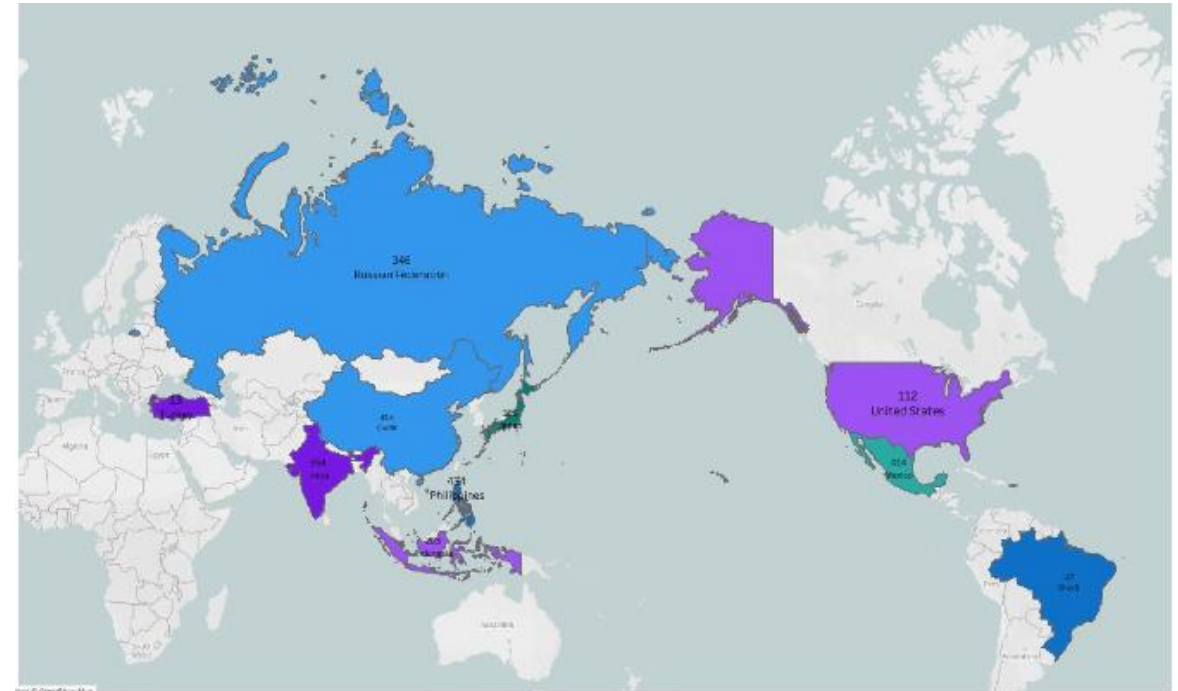


ANALYTICAL WORKFLOW



Top Countries by Customer Counts

```
Query
SELECT all_customers.country,
       all_customers.all_customer_count,
       COUNT(DISTINCT top_5.customer_id) AS top_customer_count
FROM (
  SELECT D.country,
         COUNT(A.customer_id) AS all_customer_count
  FROM customer A
  INNER JOIN address B ON A.address_id = B.address_id
  INNER JOIN city C ON B.city_id = C.city_id
  INNER JOIN country D ON C.country_id = D.country_id
  GROUP BY D.country
) AS all_customers
LEFT JOIN (
  SELECT A.customer_id, D.country
  FROM customer A
  INNER JOIN address B ON A.address_id = B.address_id
  INNER JOIN city C ON B.city_id = C.city_id
  INNER JOIN country D ON C.country_id = D.country_id
  INNER JOIN payment E ON A.customer_id = E.customer_id
  WHERE C.city IN (
    FROM customer A
    INNER JOIN address B ON A.address_id = B.address_id
    INNER JOIN city C ON B.city_id = C.city_id
    INNER JOIN country D ON C.country_id = D.country_id
    WHERE D.country IN (
      SELECT D.country
      FROM customer A
      INNER JOIN address B ON A.address_id = B.address_id
      INNER JOIN city C ON B.city_id = C.city_id
      INNER JOIN country D ON C.country_id = D.country_id
      GROUP BY D.country
      ORDER BY COUNT(A.customer_id) DESC
      LIMIT 10
    )
  )
  GROUP BY C.city
  ORDER BY COUNT(A.customer_id) DESC
  LIMIT 10
)
GROUP BY A.customer_id, D.country
ORDER BY SUM(E.amount) DESC
LIMIT 5
) AS top_5
ON all_customers.country = top_5.country
GROUP BY all_customers.country, all_customers.all_customer_count
ORDER BY all_customers.all_customer_count DESC;
```



THIS SLIDE HIGHLIGHTS THE TOP 10 COUNTRIES BY CUSTOMER COUNT, WITH **INDIA**, **RUSSIA**, AND THE **UNITED STATES** LEADING. THE MAP VISUALLY REPRESENTS THE GEOGRAPHIC DISTRIBUTION, HELPING IDENTIFY HIGH-DEMAND REGIONS FOR TARGETED BUSINESS STRATEGIES. THE INSIGHTS WERE GENERATED USING ADVANCED SQL QUERIES COMBINING CUSTOMER, LOCATION, AND TRANSACTION DATA.

TOP 5 HIGHEST PAYING CUSTOMERS

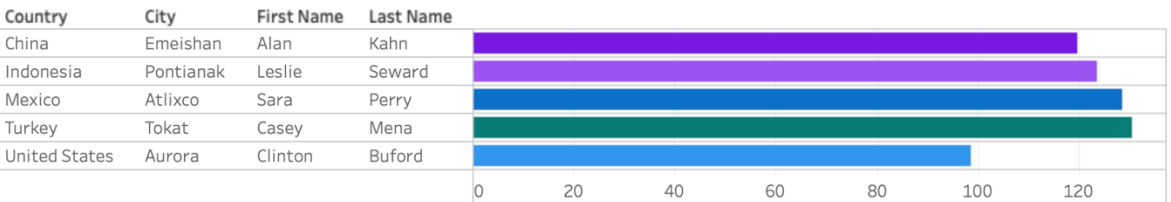
QUERY

```
SELECT A.customer_id, A.first_name, A.last_name, D.country, C.city,
SUM(E.amount) AS total_amount_paid
FROM customer A
INNER JOIN address B ON A.address_id = B.address_id
INNER JOIN city C ON B.city_id = C.city_id
INNER JOIN country D ON C.country_id = D.country_id
INNER JOIN payment E ON A.customer_id = E.customer_id
WHERE C.city IN (
  SELECT C.city
  FROM customer A
  INNER JOIN address B ON A.address_id = B.address_id
  INNER JOIN city C ON B.city_id = C.city_id
  INNER JOIN country D ON C.country_id = D.country_id
  WHERE D.country IN (
    SELECT D.country
    FROM customer A
    INNER JOIN address B ON A.address_id = B.address_id
    INNER JOIN city C ON B.city_id = C.city_id
    INNER JOIN country D ON C.country_id = D.country_id
    GROUP BY D.country
    ORDER BY COUNT(A.customer_id) DESC
    LIMIT 10
  )
)
GROUP BY C.city
ORDER BY COUNT(A.customer_id) DESC
LIMIT 10
)
GROUP BY A.customer_id, A.first_name, A.last_name, D.country, C.city
ORDER BY total_amount_paid DESC
LIMIT 5;
```

Top 10 Cities from the Top 10 Countries



Top 5 Highest Paying Customers



RENTAL DURATION



Physical movie rentals typically last between 3 to 7 days, with an average rental period of 5 days.

In contrast, major competitors in the digital rental market usually offer access to a movie for 48 hours once viewing begins.

Since digital platforms allow unlimited customers to stream the same movie simultaneously, shorter rental periods are less critical.

To stand out from the competition, Rockbuster should offer a standard 5-day rental window for most movies, giving users more flexibility without compromising access.

RECOMMENDATIONS BASED ON INSIGHTS

Compete

Differentiate from competitors by offering extended rental periods, giving users more flexibility with their movie access.

Target

Focus initial efforts on regions where Rockbuster already has a strong customer presence to build momentum and maximize impact.

Appeal

Cater to diverse audiences by including films in their native languages, boosting engagement and cultural connection.

Promote

Strengthen brand image and customer loyalty by offering free trials to top users, while collecting feedback to improve the new streaming platform.



GameCo.

Objective:

Conduct a descriptive analysis of historical video game sales data to better understand market patterns and assess the potential success of upcoming GameCo titles.

Project Data:

- Project Overview
- Global Video Game Sales (1980–2016) |

Limitations:

- Only includes physical game sales (no digital data)
- Dataset ends in 2016, with no recent figures
- Titles with fewer than 10,000 units sold are excluded

Techniques and Skills:

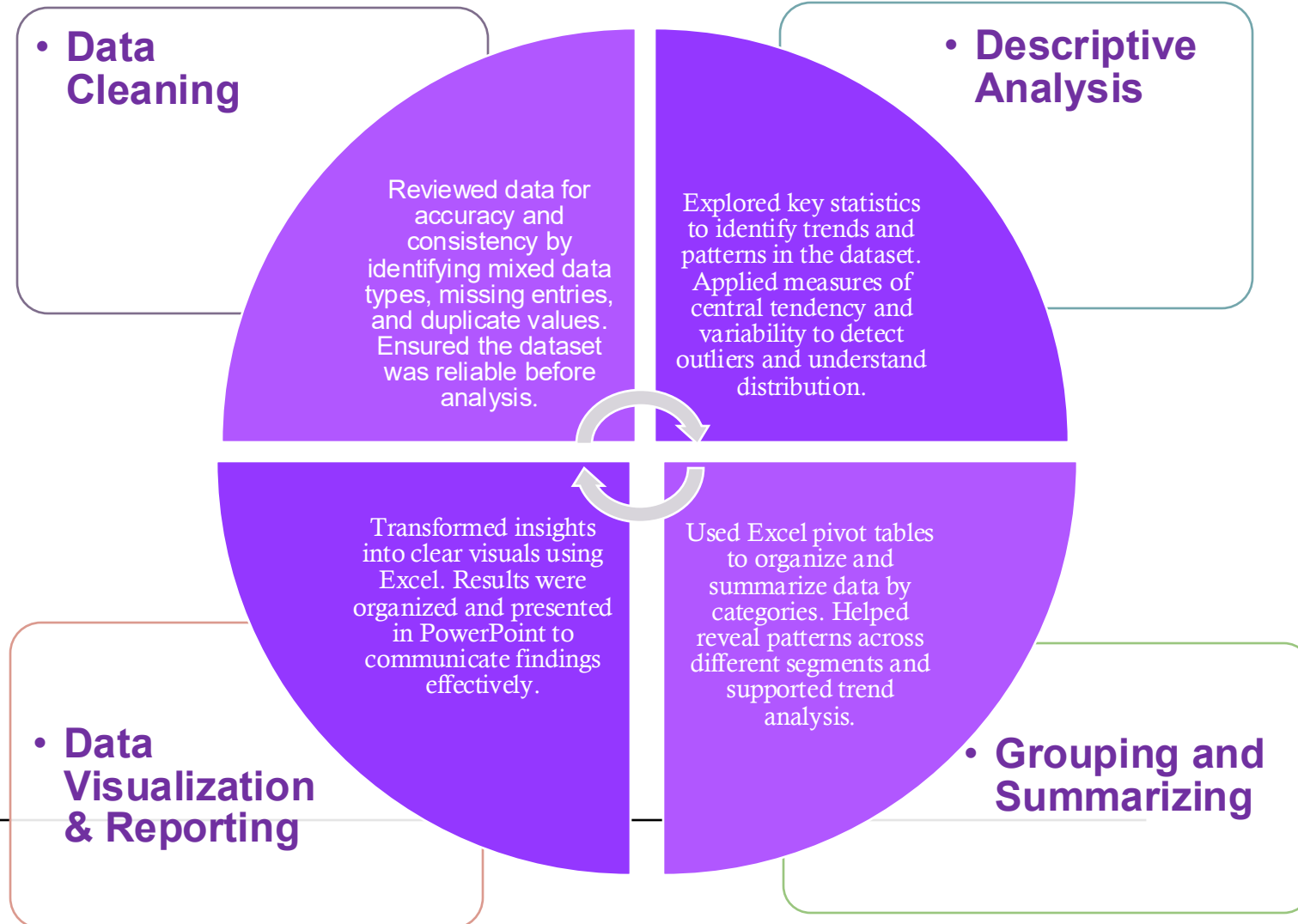
- Interpreting and navigating large datasets
- Cleaning and organizing sales records
- Summarizing and grouping data trends
- Extracting insights through exploratory analysis
- Creating visual representations of findings
- Building a clear narrative from data



TOOLS USED



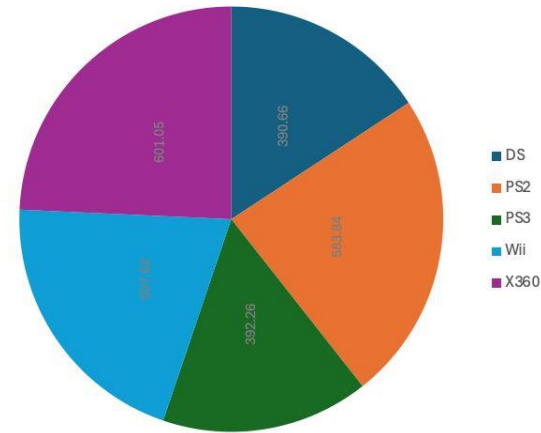
ANALYTICAL WORKFLOW



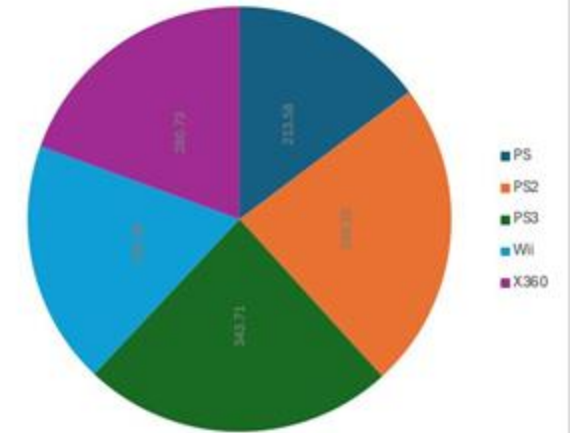
TOP PLATFORMS AND GENRES BY REGIONS



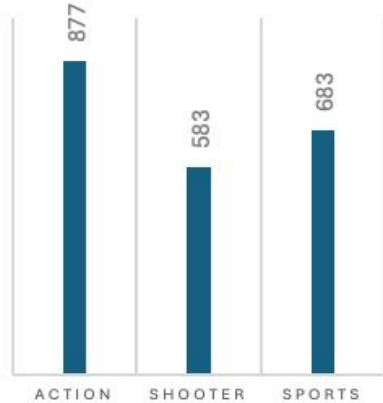
NA TOP PLATFORMS



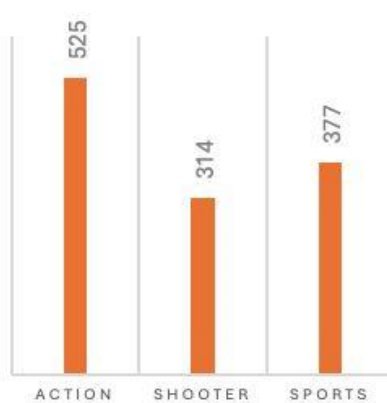
EU TOP PLATFORMS



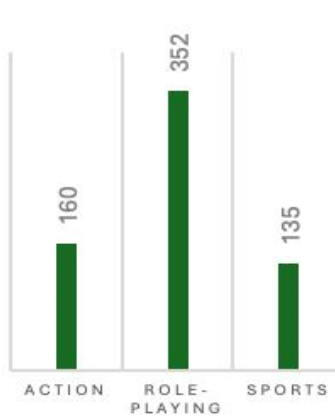
NA TOP 3 GENRE



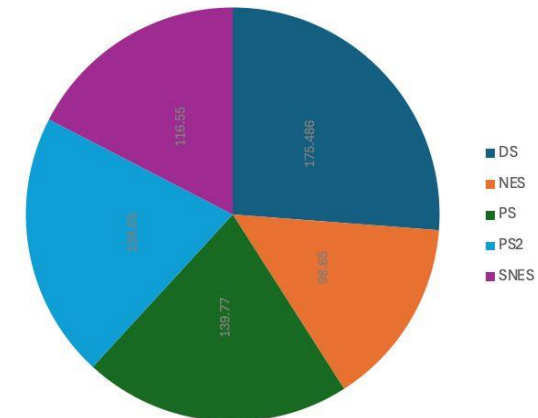
EU TOP 3 GENRE



JP TOP 3 GENRE

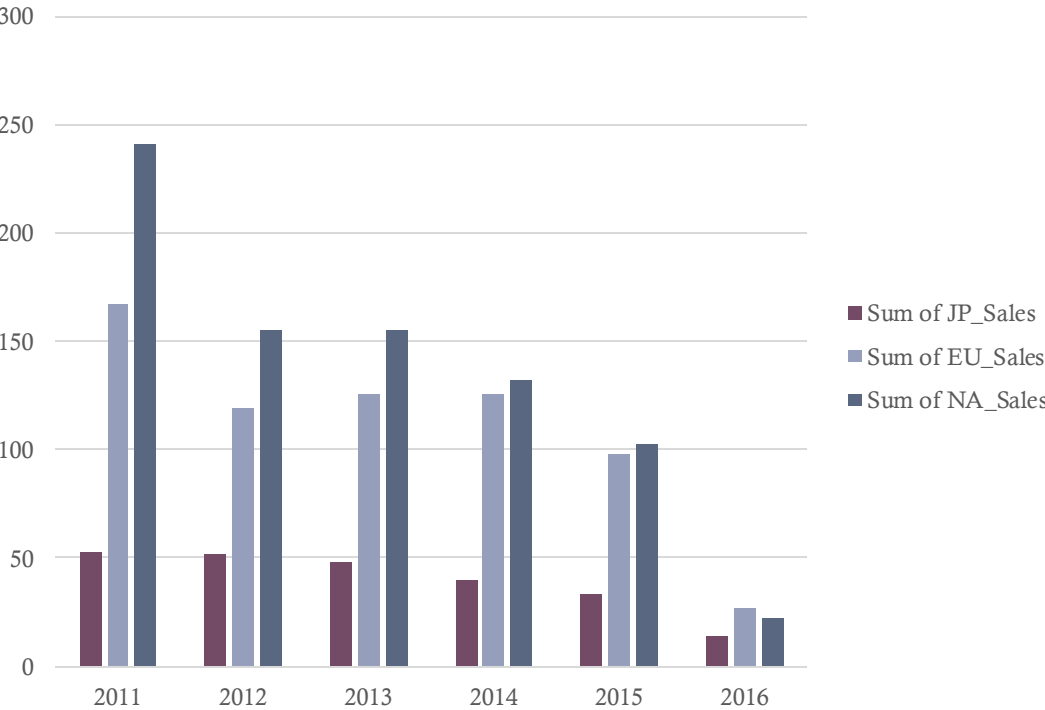


JP TOP PLATFORMS

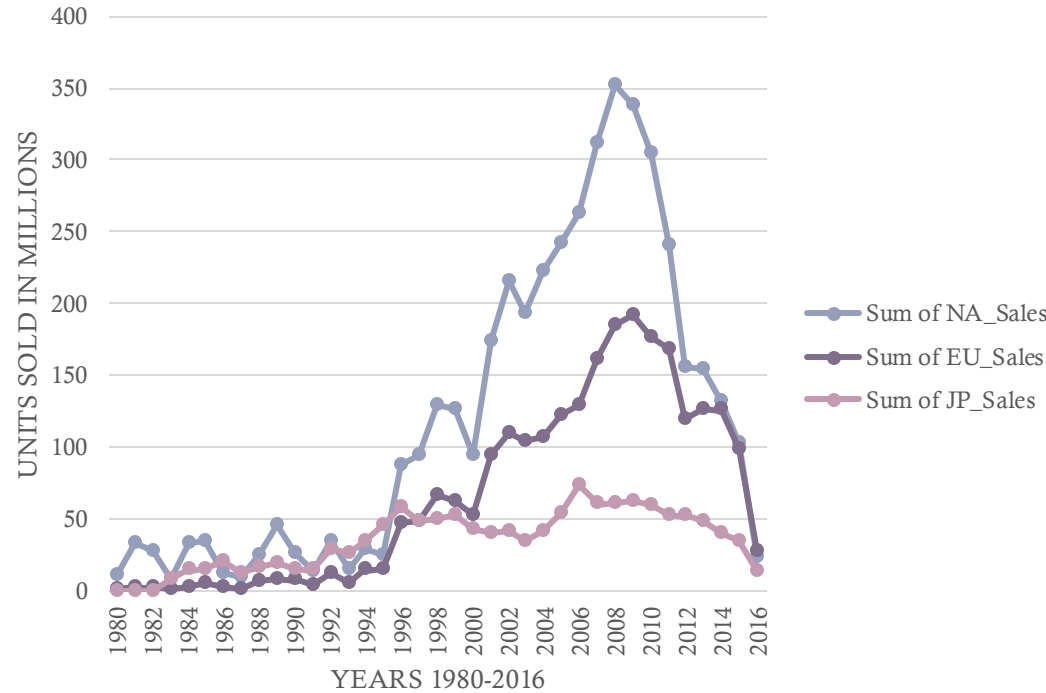


REGIONAL SALES TRENDS IN THE VIDEO GAME MARKET

The bar chart displays regional sales from 2011 to 2016, highlighting a consistent dominance of North American sales over Europe and Japan. While all regions show a decline toward 2016, the gap between them remains steady, with Japan maintaining the lowest volume.



The line chart illustrates total sales from 1980 to 2016. North America leads overall, peaking in the mid-2000s, followed by Europe. A significant drop is observed after 2009 across all regions, reflecting a global shift in gaming platforms or sales patterns.



RECOMMENDATIONS BASED ON INSIGHTS

Prioritize NA

GamesCo should continue prioritizing the North American market, as it has consistently led in global sales throughout the years.

Expand in Europe

Europe has shown steady growth and even surpassed North America in 2016. GamesCo should invest more in this region through targeted marketing and regional adaptations.

Focus on RPGs in Japan

Role-playing games dominate Japan's market. Allocating a larger marketing budget to this genre can help strengthen GamesCo's position in the region.

Maintain Action genre support

While RPGs are top performers in Japan, Action remains the second most popular genre. GamesCo should maintain strong offerings in this category as well.

Invest in Nintendo

Nintendo is the only publisher shared across all three major regions — NA, EU, and JP. Continued investment in Nintendo platforms will support global alignment and reach.



INFLUENZA SEASON IN THE US

Project Overview:

Objective:

Support a medical staffing agency that provides temporary healthcare workers to clinics and hospitals based on demand. This project analyzes flu trends to help identify peak seasons when staffing needs increase. The final insights will guide decisions on how to allocate resources more efficiently across different regions of the U.S.

Project Data:

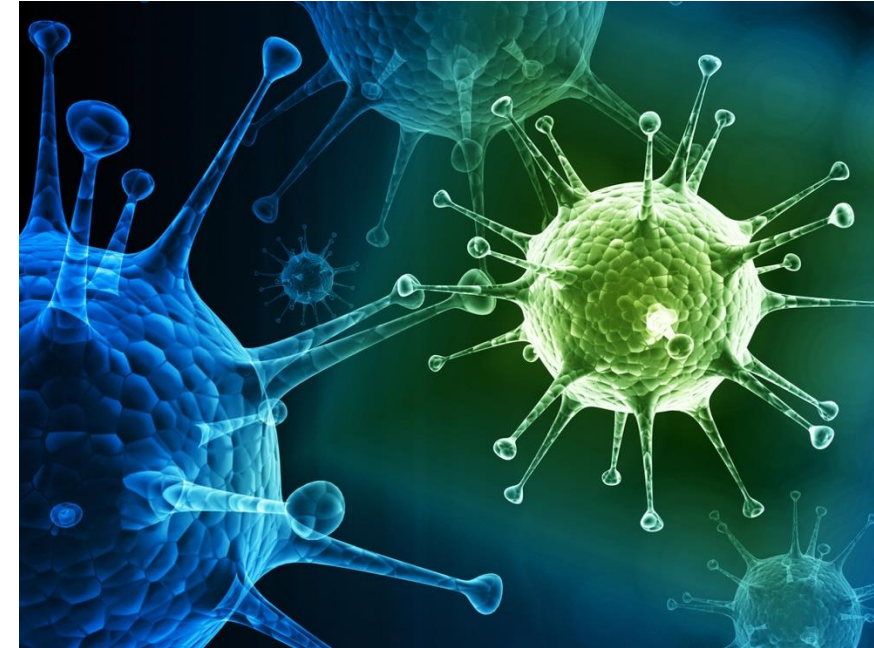
- Project Brief
- Influenza Mortality Data | Source: CDC
- U.S. Population Data | Source: US Census Bureau
- Flu Visit Statistics | Source: CDC Flu View
- Pediatric Vaccination Survey | Source: CDC

Limitations:

- Data spans only from 2009 to 2017
- Mortality data reflects only one recorded cause of death, which may exclude flu-related complications

Techniques and Skills:

- Structuring a public health data project
- Validating and profiling medical datasets
- Cleaning and preparing flu-related records
- Integrating and transforming health data
- Running statistical tests and trend analysis
- Communicating insights through Tableau dashboards



TOOLS USED



ANALYTICAL WORKFLOW

- **Project Planning & Framing**

Reviewed data for accuracy and consistency by identifying mixed data types, missing entries, and duplicate values. Ensured the dataset was reliable before analysis.

- **Data Collection & Preparation**

Explored key statistics to identify trends and patterns in the dataset. Applied measures of central tendency and variability to detect outliers and understand distribution.

- **Insight Delivery & Dashboarding**

Transformed insights into clear visuals using Excel. Results were organized and presented in PowerPoint to communicate findings effectively.

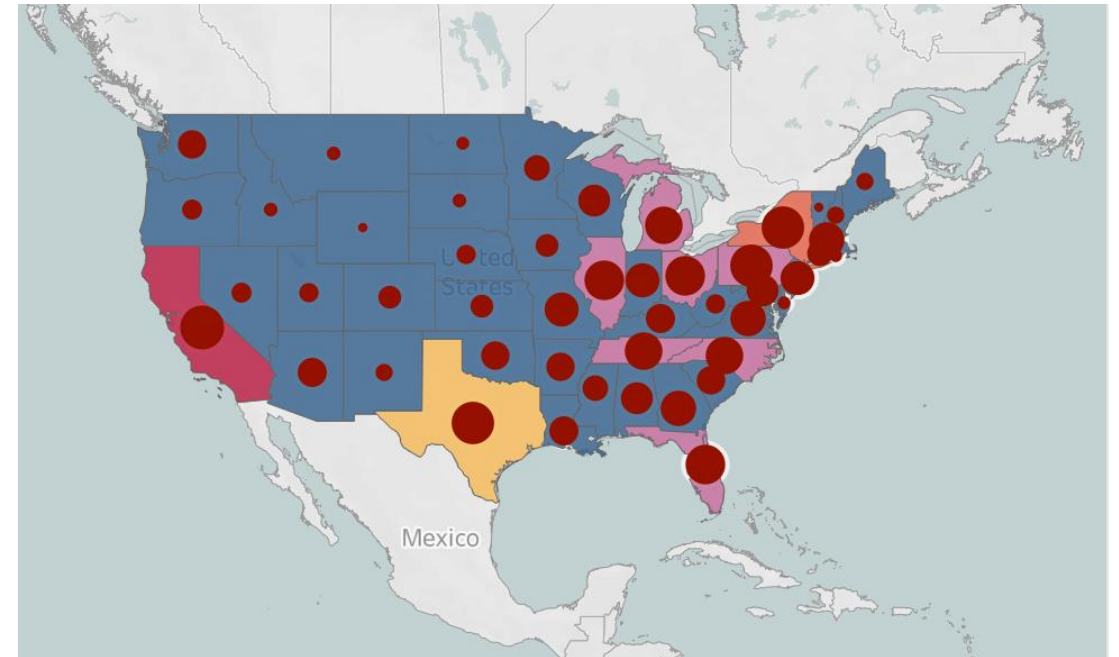
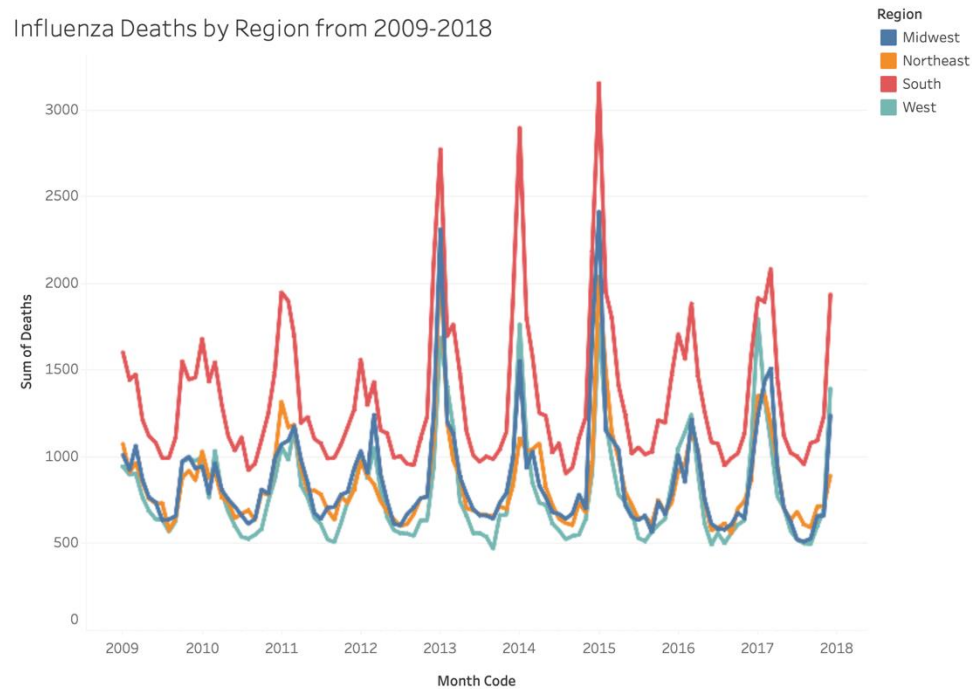
- **Analytical Testing & Validation**

Used Excel pivot tables to organize and summarize data by categories. Helped reveal patterns across different segments and supported trend analysis.



REGIONAL AND SEASONAL INSIGHTS INTO U.S. INFLUENZA-RELATED MORTALITY

Influenza Deaths by Region from 2009-2018



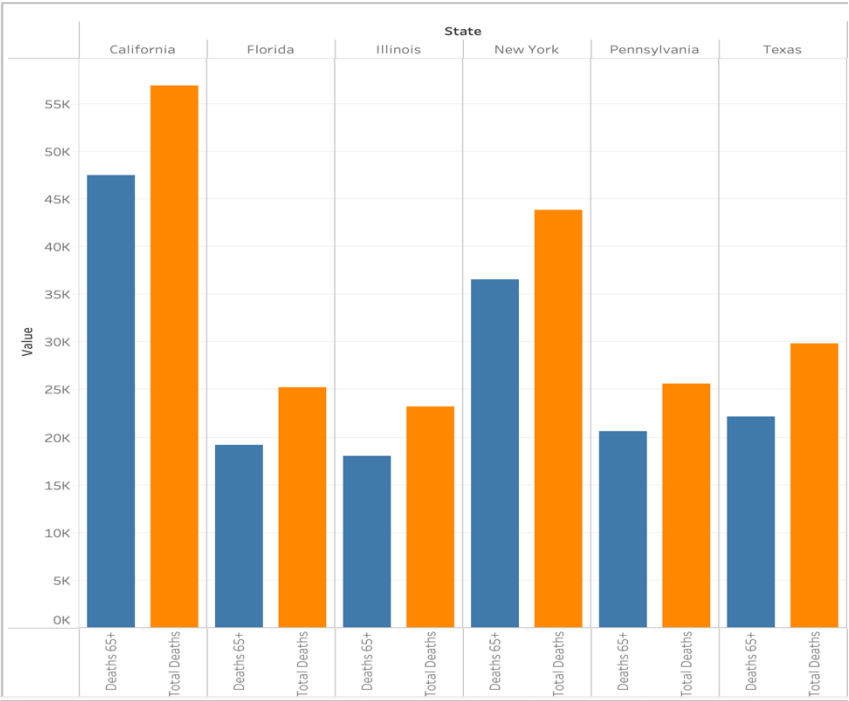
INFLUENZA MORTALITY IN THE U.S. (2009-2017): A STATE-BY-STATE ANALYSIS

Age Group & Total Deaths Breakdown

This bar chart compares total influenza deaths vs. deaths among individuals aged 65+.

Older adults (65+) account for a significant portion of total deaths, emphasizing the need for targeted vaccinations and medical preparedness.

The highest mortality rates are observed in California, New York, and Texas, indicating states that require stronger public health interventions.



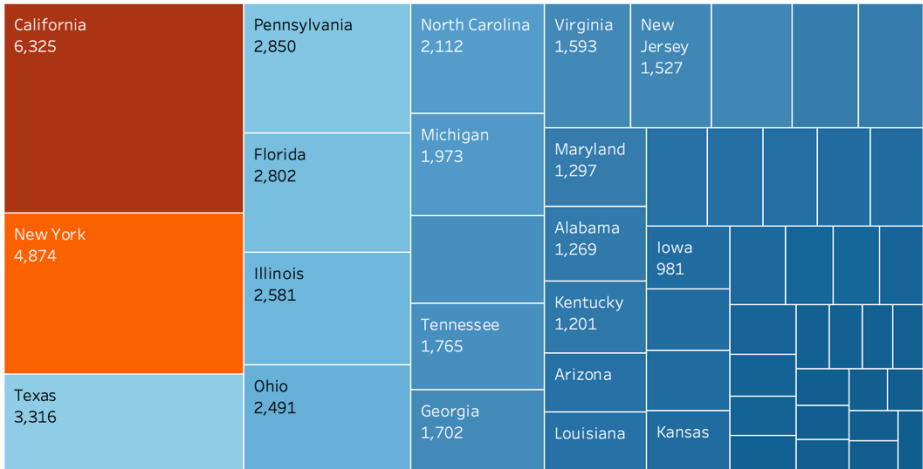
State-by-State Impact

The treemap visualizes influenza deaths by state, where darker shades indicate higher mortality rates.

California and New York lead with the most recorded deaths, followed by Texas and Florida.

States with lower case counts (e.g., Kentucky, Arizona, and Iowa) still contribute to overall mortality and require monitoring.

USA Influenza Deaths 2009-2017



RECOMMENDATIONS BASED ON INSIGHTS

Strategic Staff Deployment:

To effectively manage the surge in influenza-related cases, medical staffing should be increased from December through February, when the peak flu season occurs. Maintaining higher staffing levels into March and April is also essential, as a secondary spike in flu-related deaths often appears during this time. Preemptive scheduling, staff cross-training, and temporary support staff can help ensure hospitals and clinics remain responsive during periods of high patient volume.

Target High-Risk States:

California, Pennsylvania, Florida, Texas, New York, and Illinois consistently reported the highest number of influenza-related deaths. These states should be prioritized for enhanced healthcare resources, vaccination programs, and public health outreach. Deploying mobile vaccination clinics and launching localized prevention campaigns can help reduce the burden in these high-risk regions.

Prioritize the 65+ Population:

Older adults remain the most vulnerable group during flu season. Establishing vaccination sites in accessible locations such as community centers, pharmacies, senior living facilities, and churches ensures seniors can easily receive their flu shots. Providing free or subsidized vaccinations, along with transportation options and educational support, can significantly increase vaccination rates and reduce mortality among the 65+ population.



Pig E. Bank

Objective:

To conduct an exploratory analysis of customer data to report on key metrics, evaluate client risk, and support the development of models that help Pig E. Bank enhance compliance and decision-making efficiency.

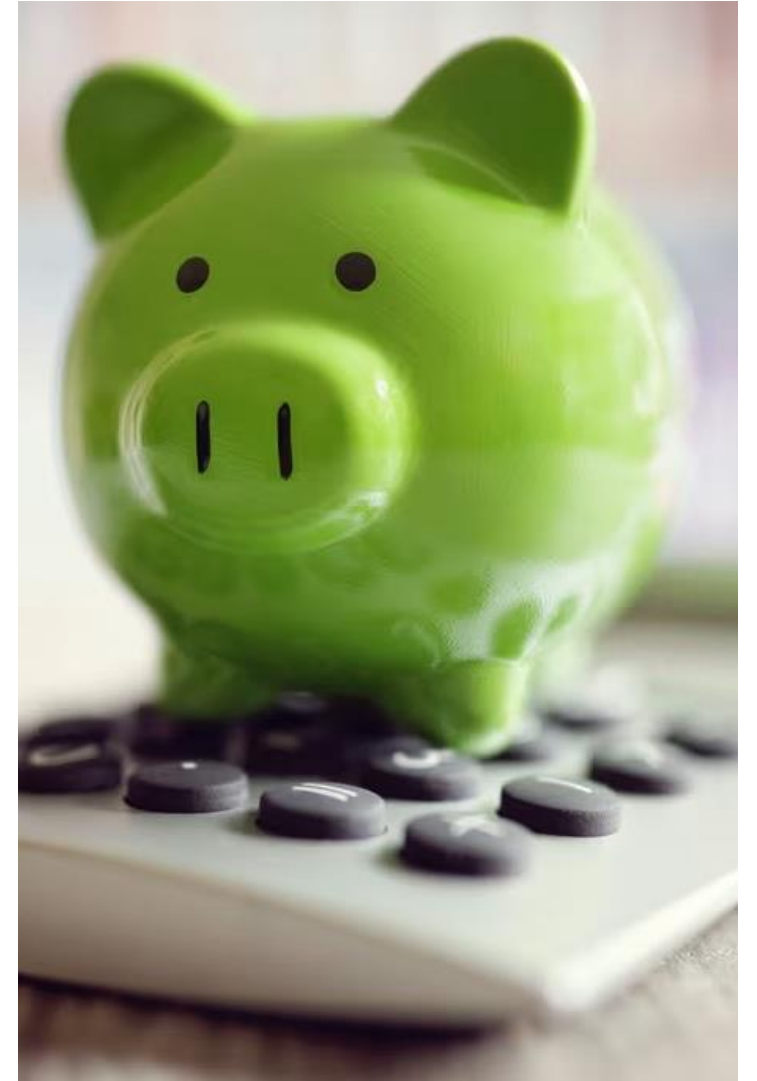
Project Data:

Project Brief
Data Set

Techniques and Skills:

Big Data Management
Data Ethics
Data Mining
Predictive Analysis
Data Visualization in Excel
Excel-Based Reporting

Tools used



ANALYTICAL WORKFLOW

• Data Ethics

Reviewed the dataset to ensure compliance with data protection regulations. Any sensitive or personally identifiable information (PII) was anonymized or removed to uphold ethical standards in handling financial data.

• Data Cleaning & Preparation

Standardized the dataset by correcting inconsistent formats, addressing missing or duplicate values, and preparing it for accurate analysis. Ensured a clean foundation for statistical modeling and visualization.

• Insights & Visual Reporting

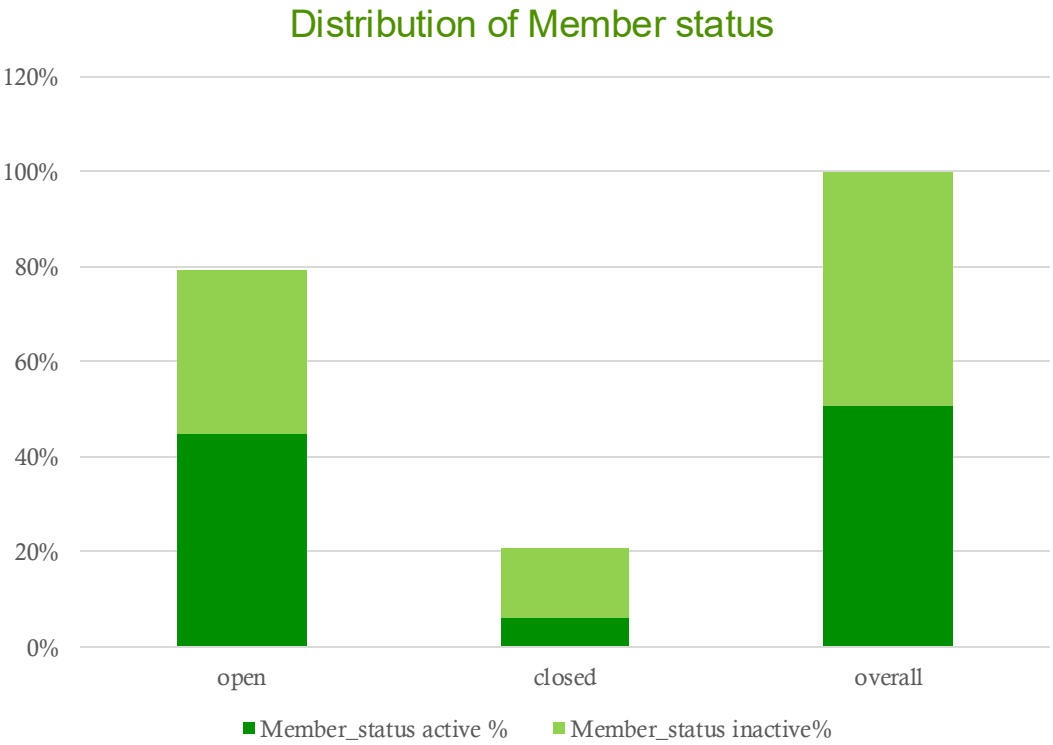
Transformed data findings into visual insights to support decision-making. Built a simple decision tree to highlight key customer churn indicators and presented actionable trends using Excel charts and diagrams.

• Descriptive & Diagnostic Analysis

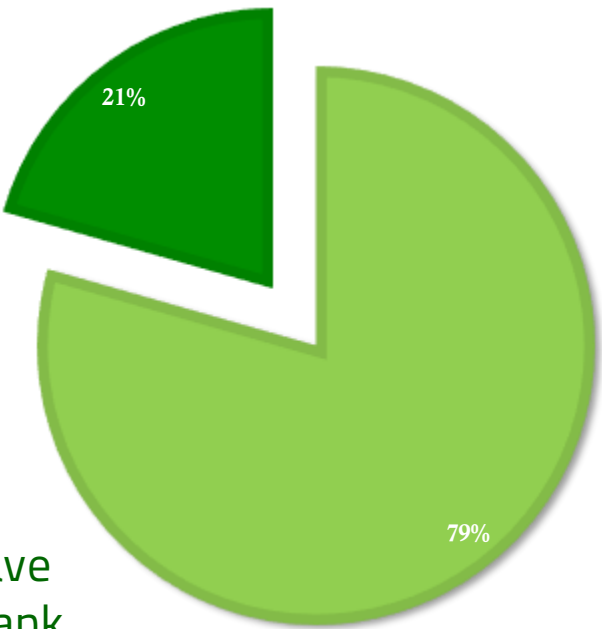
Used Excel to organize and segment data. Analyzed patterns in customer activity to calculate churn rates and identify correlations between variables like age, income, and account status.



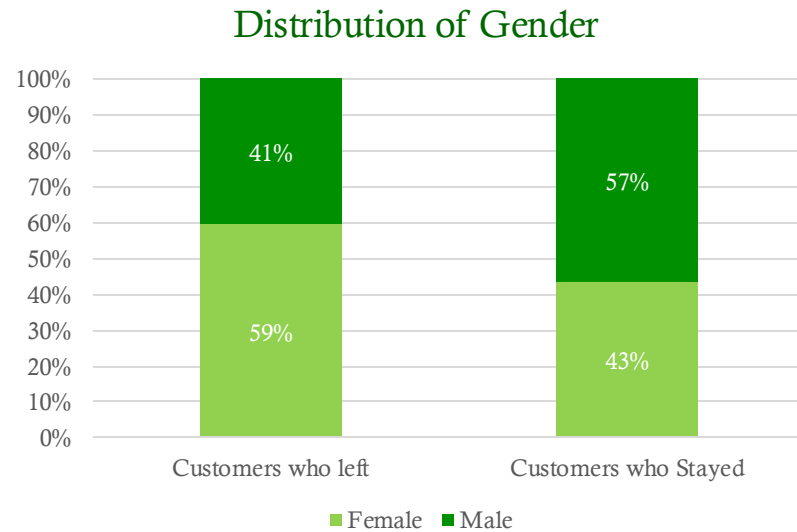
CLIENT LOYALTY INSIGHTS



21% of customers have **closed** their bank accounts



PRIMARY FACTORS INFLUENCING CUSTOMER LOYALTY AND ATTRITION



Age

70% of those who left vs 32% of those who stayed were over 40 years of age

Active account

- 70% of those who left vs 32% of those who stayed were not active members

Gender

59% of those who left vs 43% of those who stayed were women

Number of products

- 70% of those who left vs 47% of those who stayed used only one bank product
-

RECOMMENDATIONS BASED ON INSIGHTS

Inactive Account Engagement

Encourage account reactivation by offering time-limited bonuses or waived fees to customers who have been inactive for over six months. Use email and SMS reminders to prompt action.

Focused Customer Feedback

Launch targeted surveys for customers, especially within the 35–60 age group, to understand the specific reasons behind account closure or dissatisfaction. Use insights to shape retention strategies.

High-Value Client Benefits

Create exclusive perks for customers with balances over \$100,000. These could include better interest rates, lower transaction fees, dedicated account managers, and access to financial planning tools.

Proactive Risk Flagging

Implement a system that identifies early signs of customer disengagement—such as reduced login activity or fewer transactions—so outreach can begin before they fully disengage.



THANK YOU

*"WITHOUT DATA, YOU'RE JUST ANOTHER
PERSON WITH AN OPINION"
- W. EDWARDS DEMING*

Explore my work



Any Questions?
unazatahir38@yahoo.com

