

Hello!

My name is Shruti Garka

Here is my Data Analyst Portfolio

I hope you like it!!



ABOUT ME



I'm Shruti Garka, where the worlds of biotechnology and data analysis converge. Armed with a strong background in laboratory research, I've seamlessly transitioned into data-driven insights. With skills in data analysis, visualization using Power BI, and statistical expertise, I transform complex data into actionable insights. Proficient in Python, SQL, and driven by a passion for healthcare innovation, I'm dedicated to decoding intricate biological stories and propelling them into the realm of data. Let's explore how the fusion of biotech and data can create remarkable solutions.

List Of Projects

1

GameCo

Revolutionizing the Gaming Industry with Interactive Skill-Based Gaming Machines

2

Influenza Season in USA

Analyzing Trends and Patterns to Enhance Public Health Preparedness and Response

3

Rockbuster Stealth Analysis

Unveiling the Hidden Potential of Geological Data for Efficient Resource Exploration

4

Instacart

Transforming the Grocery Shopping Experience with On-Demand Delivery Services

5

Pig E Bank

Leveraging Data Analytics to Predict and Prevent Customer Churn in the Banking Industry

6

Rental Data Analysis in Germany

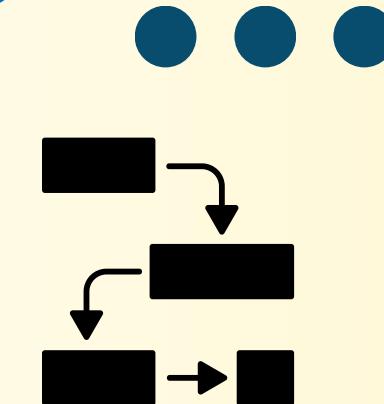
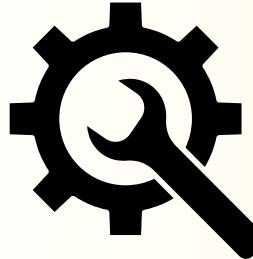
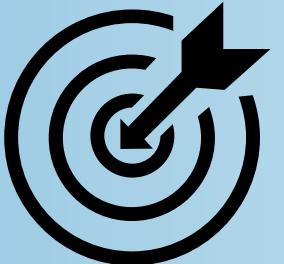
Analyzing Germany's housing rental data for valuable insights and informed decision-making.

GameCo: Pioneering a New Era of Interactive Entertainment by merging skill-based gaming with captivating experiences





Overview: Game Metrics & Trends: Unveiling the Gamer's World



Conduct a comprehensive descriptive analysis of the current video game landscape to provide valuable insights for gameco's marketing and sales teams

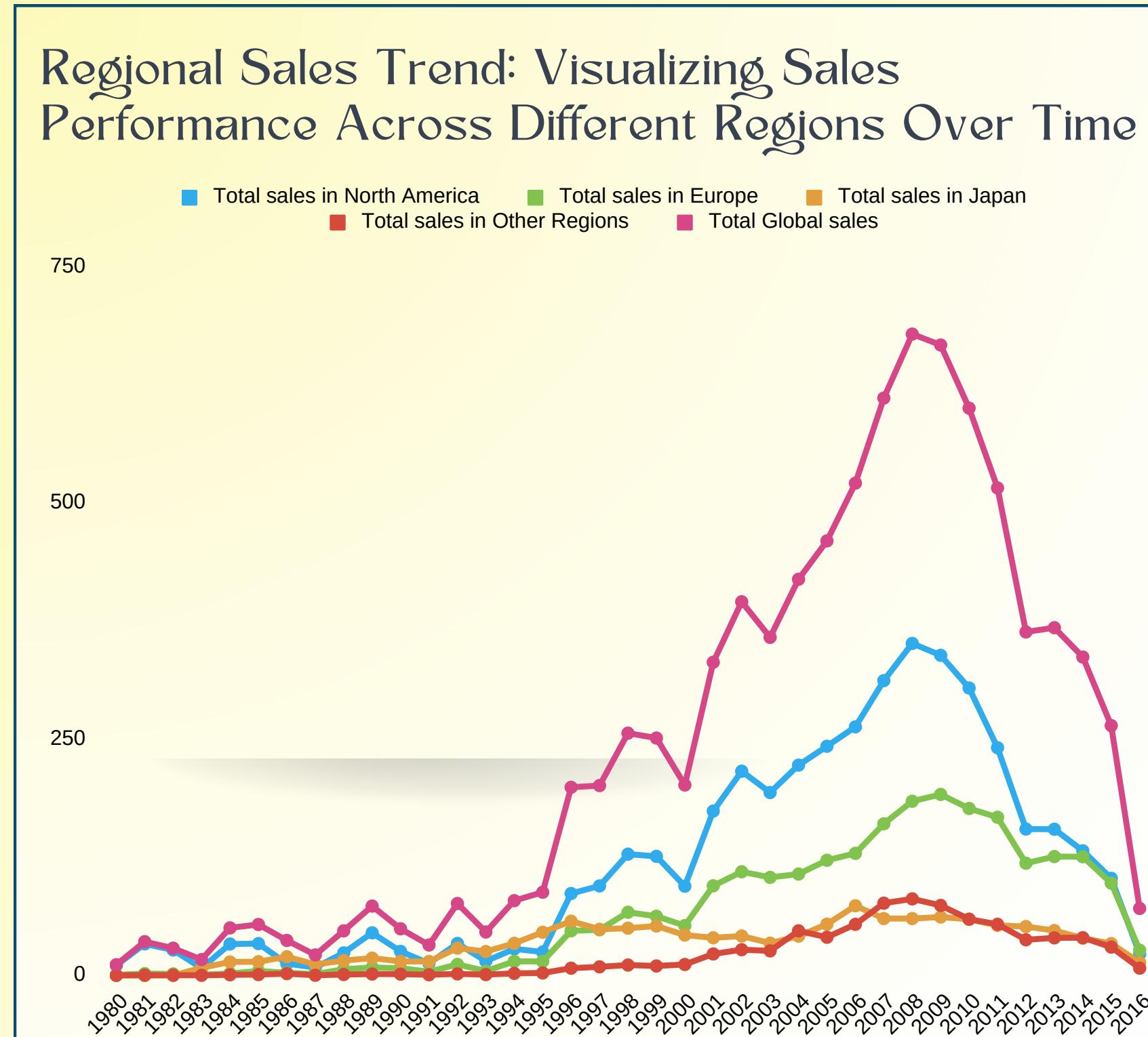
Video Games sales dataset



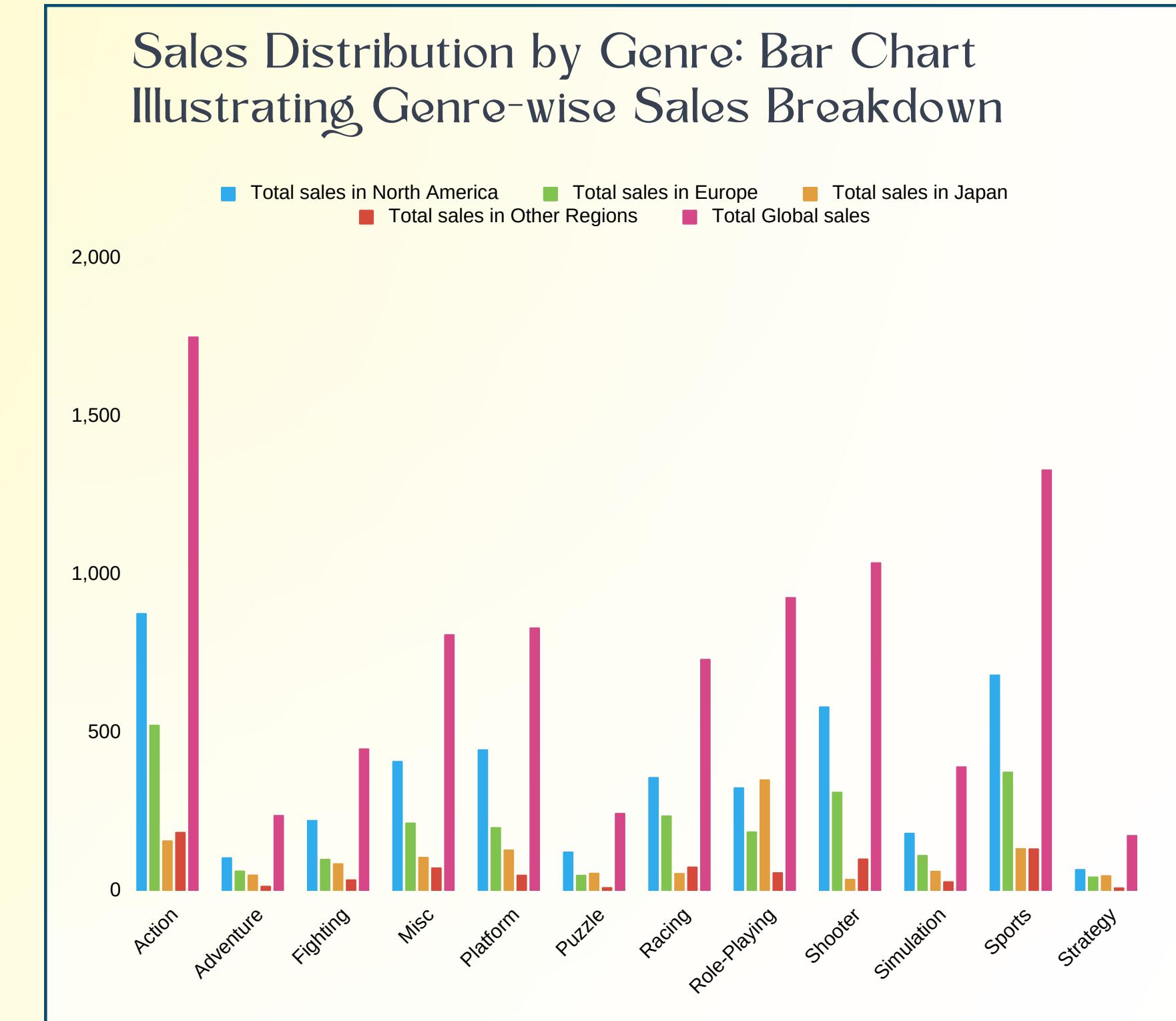
- Data Cleaning
- Data Integrity and Quality
- PivotTables
- Data Grouping and Summarizing
- Calculated Fields
- Descriptive Analysis



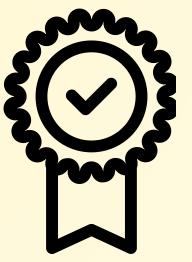
Key insights and findings from data analysis



A clear decline of sales is observed across various regions during time period 2008-2016



North America leads sales in almost every genre



Recommendations based on the analysis

- Allocate budget for exploring emerging markets like Europe and cater to local customer demand.
- Identify genres that have shown growth despite an overall decline and focus marketing efforts on maximizing returns in those genres.
- Pay attention to Shooter, Sports, and Action genres as they are emerging in Europe and North America in 2016.
- Allocate marketing budget according to sales distribution, with emphasis on North America due to its significant contribution to overall sales.



Additional sources



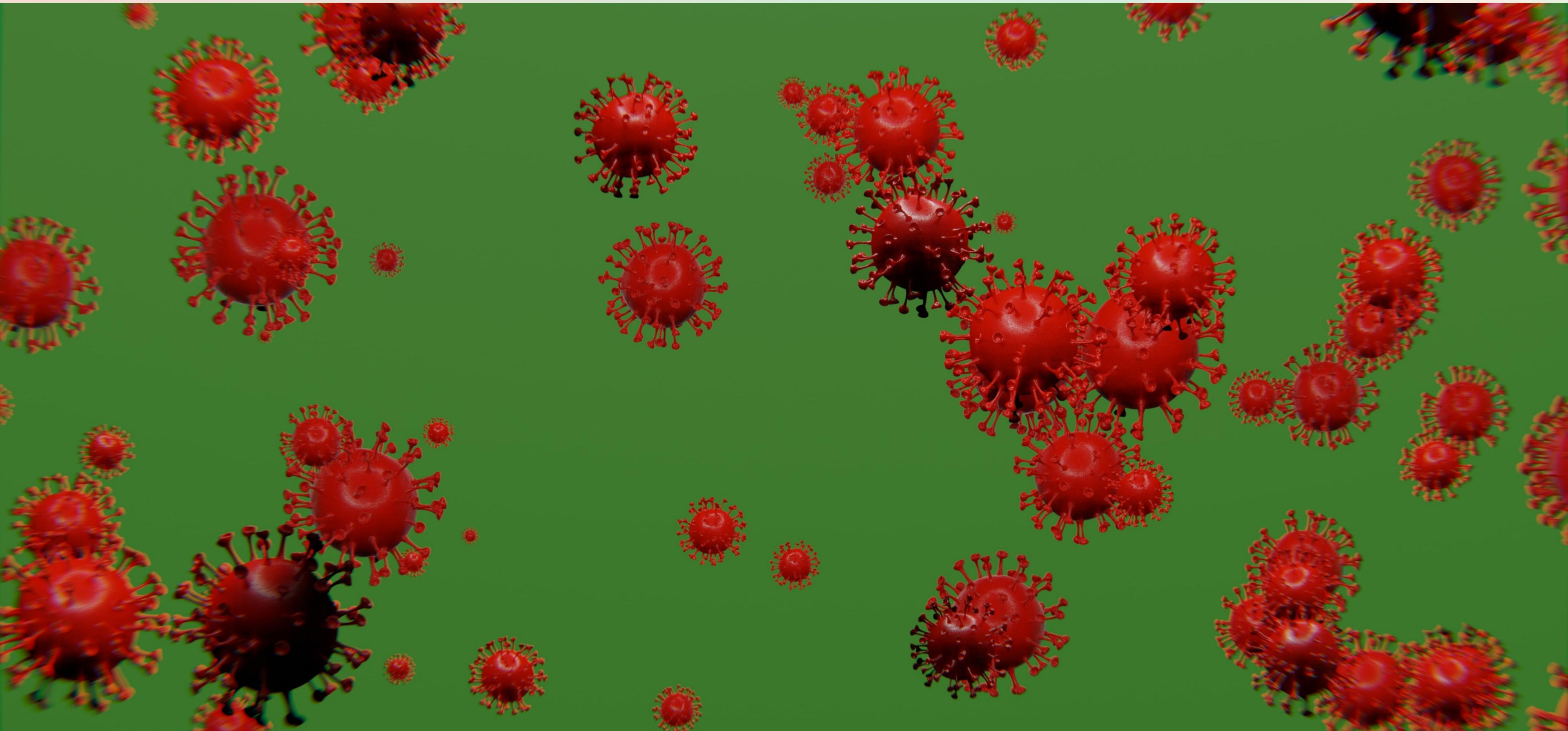
Data analysis



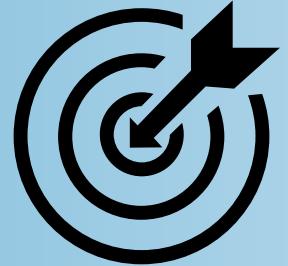
Final Presentation



Influenza Season in the USA: Tracking and Analyzing Trends for Improved Public Health Preparedness



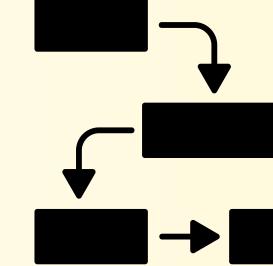
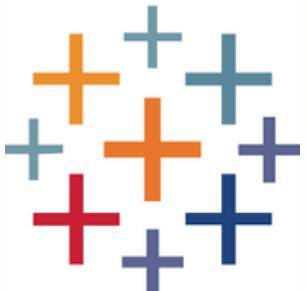
Overview: Understanding Patterns, Impacts, and Mitigation Strategies in the USA



Enhancing Preparedness for Influenza Season by Identifying High-Demand Timeframes and Locations for Additional Staff Allocation



Influenza deaths by geography, time, age, and gender
Population data by geography



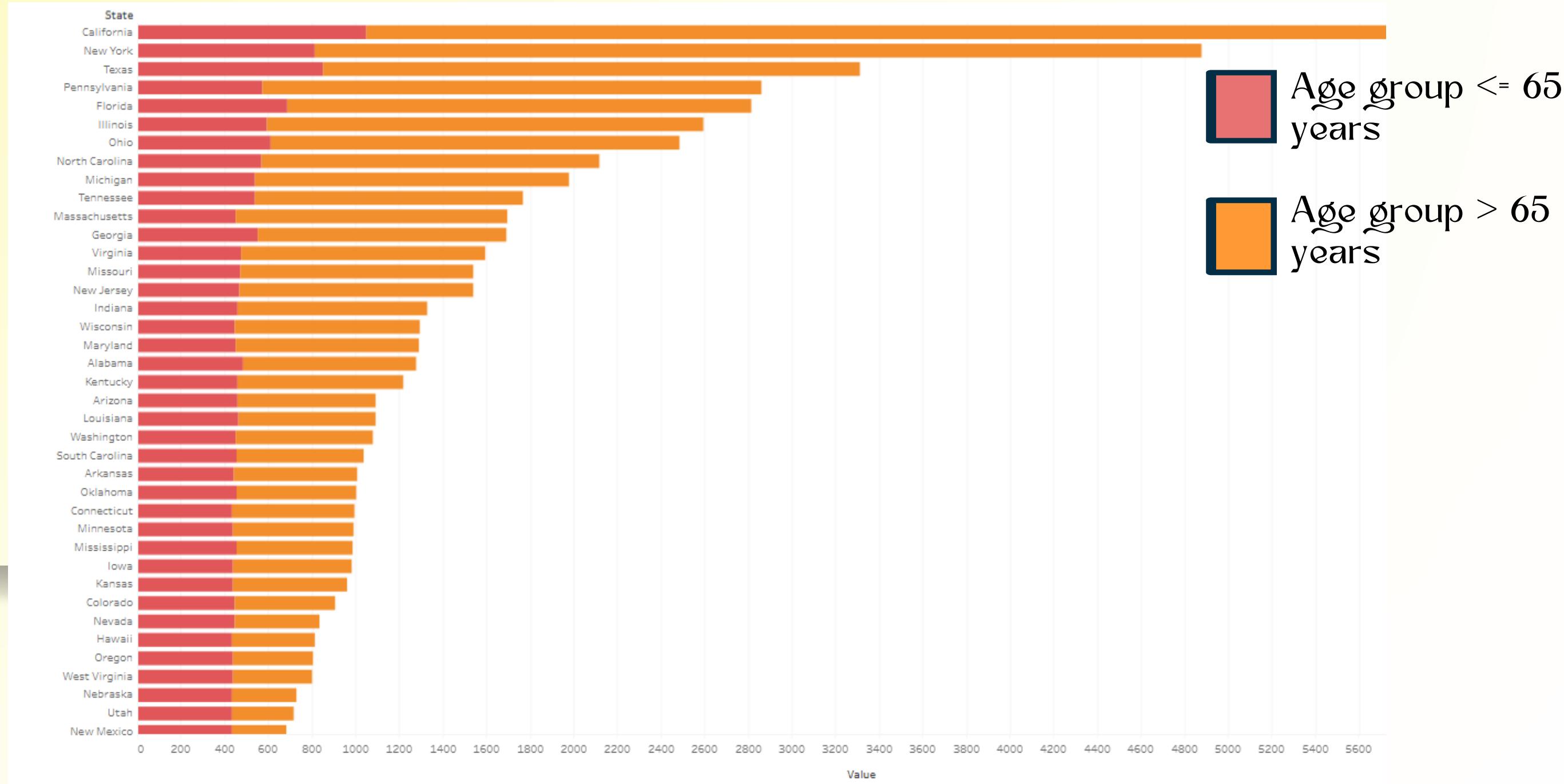
- Data Cleaning
- Data Transformation and Integration
 - Excel: Pivot Tables, VLOOKUP, PowerPoint
- Data Profiling and Integrity
- Designing a Data Research Project
- Data Visualization and Storytelling (Tableau)



Key insights and findings from data analysis



Comparison of Average Flu Death Rates by State and Age Group: Bar Chart Analysis



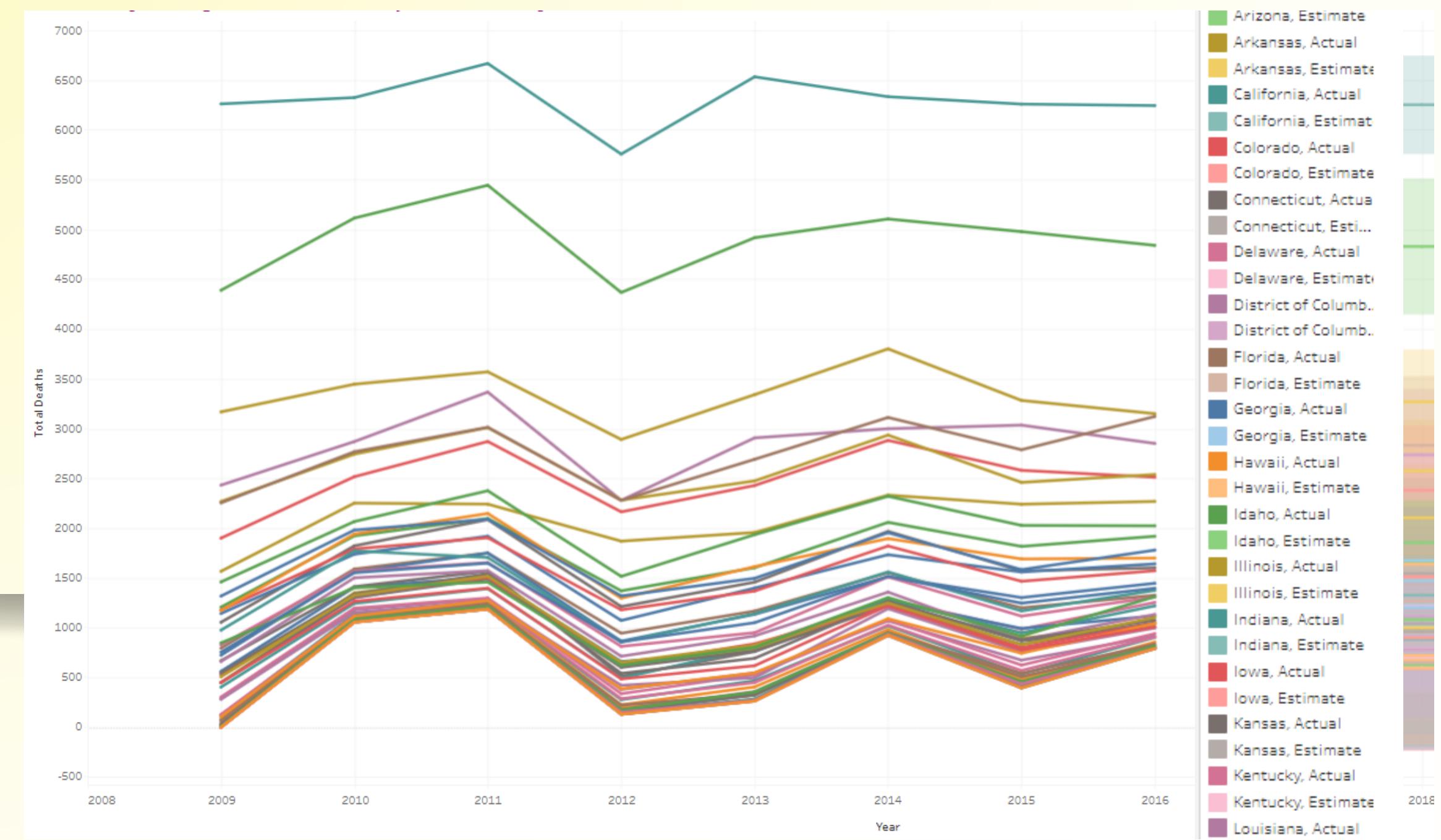
Vulnerable population (age group of 65 years and above) are more vulnerable to influenza related deaths especially in states such as California, New York and Texas being the top 3 states with higher influenza death rates



Key insights and findings from data analysis



State-wise Death Forecasts: Line Chart Analysis of Projected Mortality Rates



Forecast of Influenza deaths by State provides us with projectives for the upcoming years based on available data



Recommendations based on the analysis



Additional sources



- Prioritize the allocation of additional medical staff to states with higher vulnerable populations, ensuring adequate healthcare resources during the influenza season.
- Implement targeted campaigns to increase awareness of flu shots among the general population, aiming to reduce mortality rates associated with influenza
- Enhance surveillance systems to closely monitor influenza activity, enabling timely response and resource allocation based on real-time data.



Data analysis



Interim Report



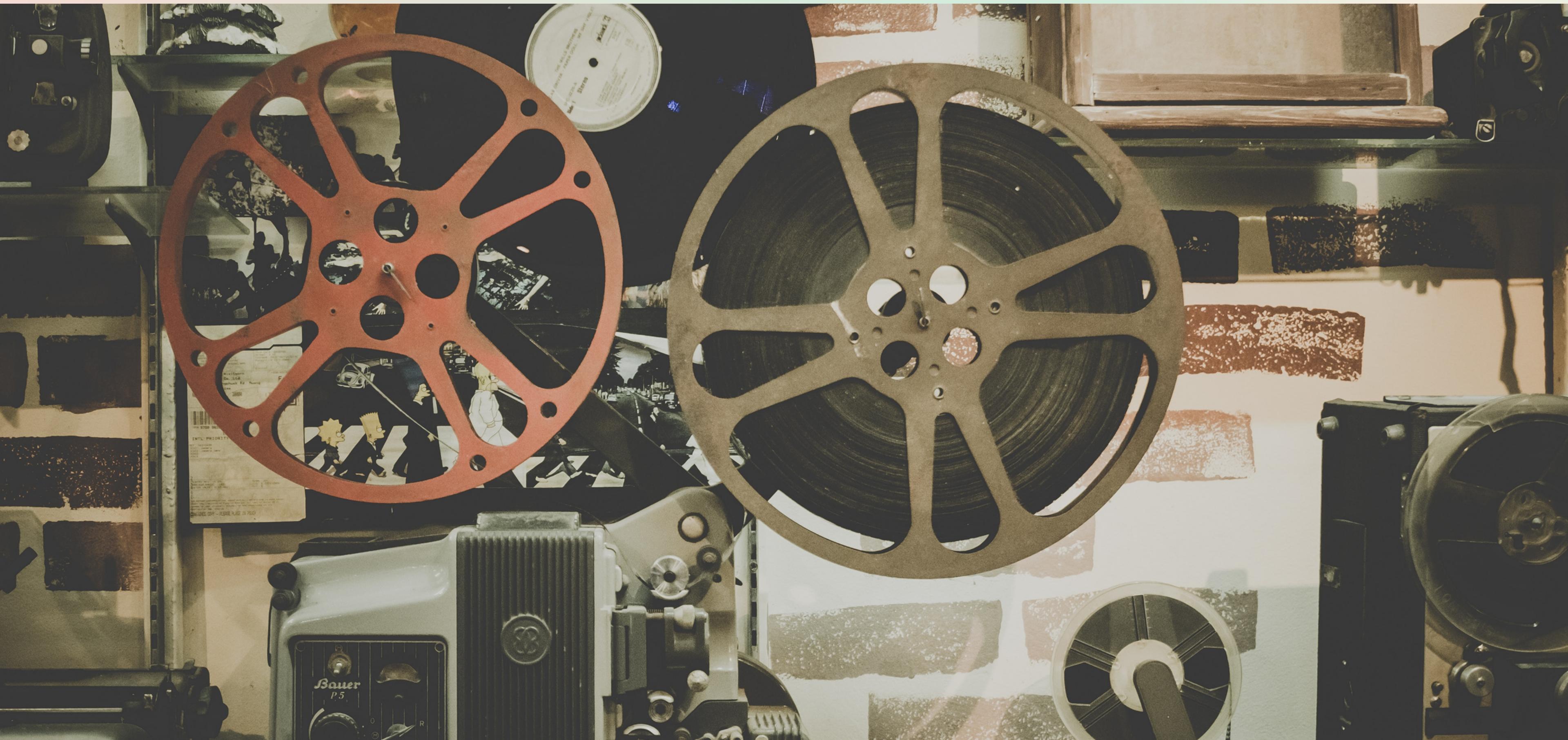
Tableau Storyboard



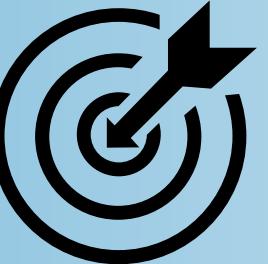
Video Presentation



Rockbuster Stealth Data Analysis: Revolutionizing Resource Exploration with Advanced Stealth Analysis Techniques



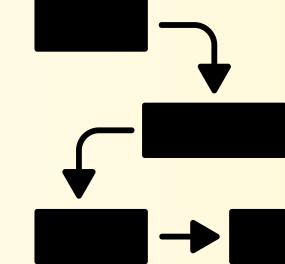
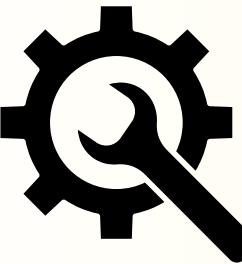
Overview: Innovations in Stealth Analysis for Enhanced Resource Exploration



Utilize data analysis to answer key business questions and support the successful launch of an online video rental service for Rockbuster



Rockbuster
Dataset



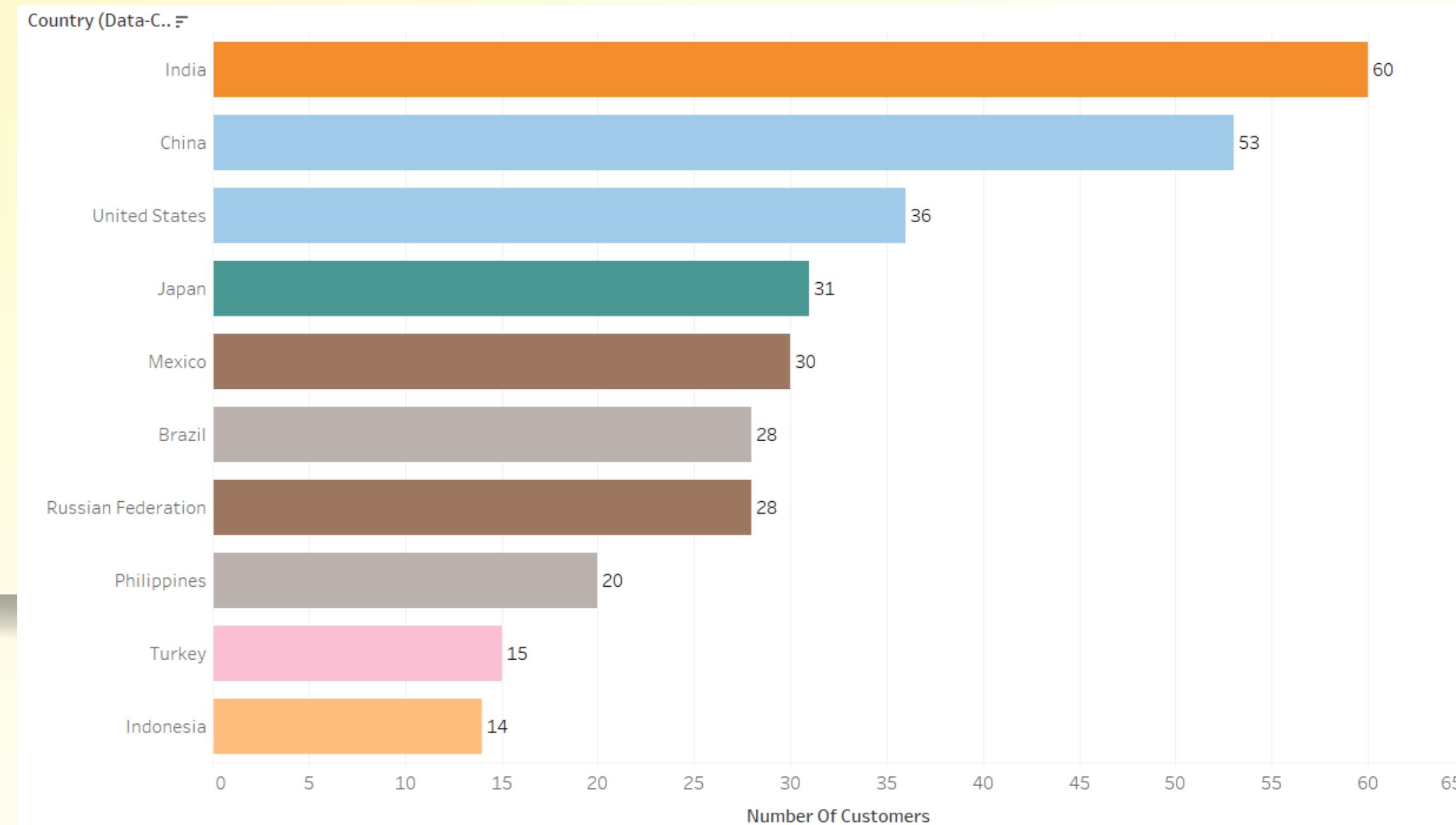
- Data Cleaning and Summarizing
- Relational Databases
- Creating a Data Dictionary
- Entity Relationship Diagram
- Filtering Data
- Joining Tables
- Subqueries



Key insights and findings from data analysis



Bar graph representing the top 10 countries by customers



India and China are having the highest Rockbuster customers



Key insights and findings from data analysis



Do sales figures vary between geographic regions?



The sales figures vary between geographical regions, India being the top followed by China



Recommendations based on the analysis

- Expand movie collection by acquiring films from various release years
- Implement a customer loyalty program that rewards our top-performing customers with incentives such as loyalty cards, discounts, and special gifts.
- Enhance the customer experience by continuously updating and refreshing our movie selection
- Collaborate with local distributors for more foreign language films



Additional sources



SQL Code



Tableau visualizations



Final Presentation



Instacart: Revolutionizing Grocery Shopping with On-Demand Delivery Services.



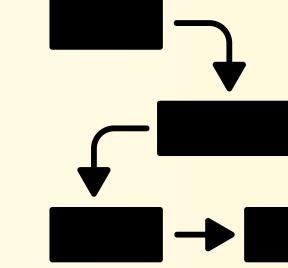
Overview: Analyzing Customer Profiles, Buyer Behavior, and Sales in the Online Grocery Delivery Service Industry



Analyze customer profiles, buying behavior, and departmental sales patterns to gain insights and provide targeted marketing recommendations for departments within the Instacart platform.



Instacart Dataset



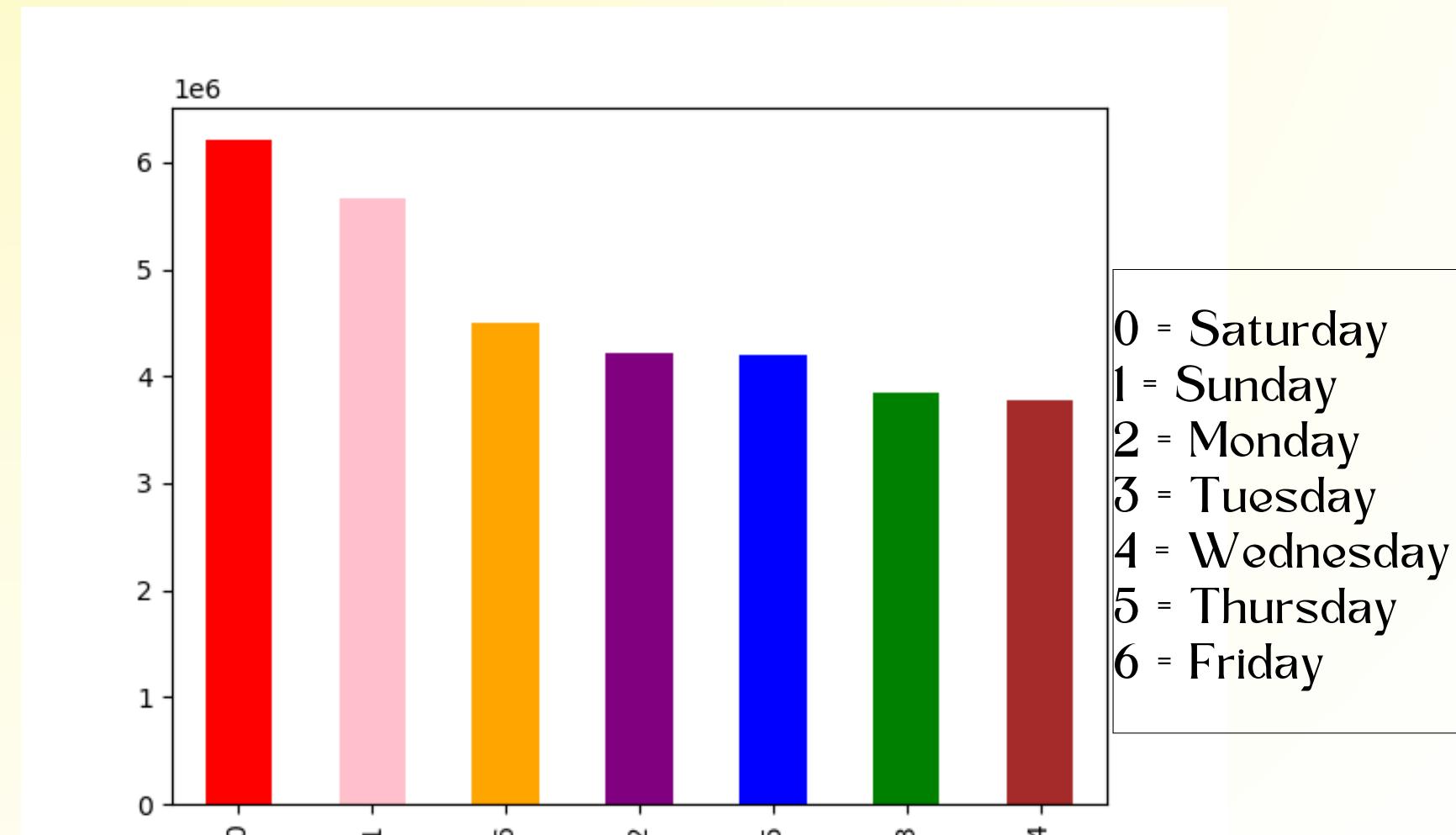
- Data Cleaning: Wrangling
- Combining and Exporting Data
- Grouping Data and Aggregating Variables
- Python Visualization
- Excel Report



Key insights and findings from data analysis

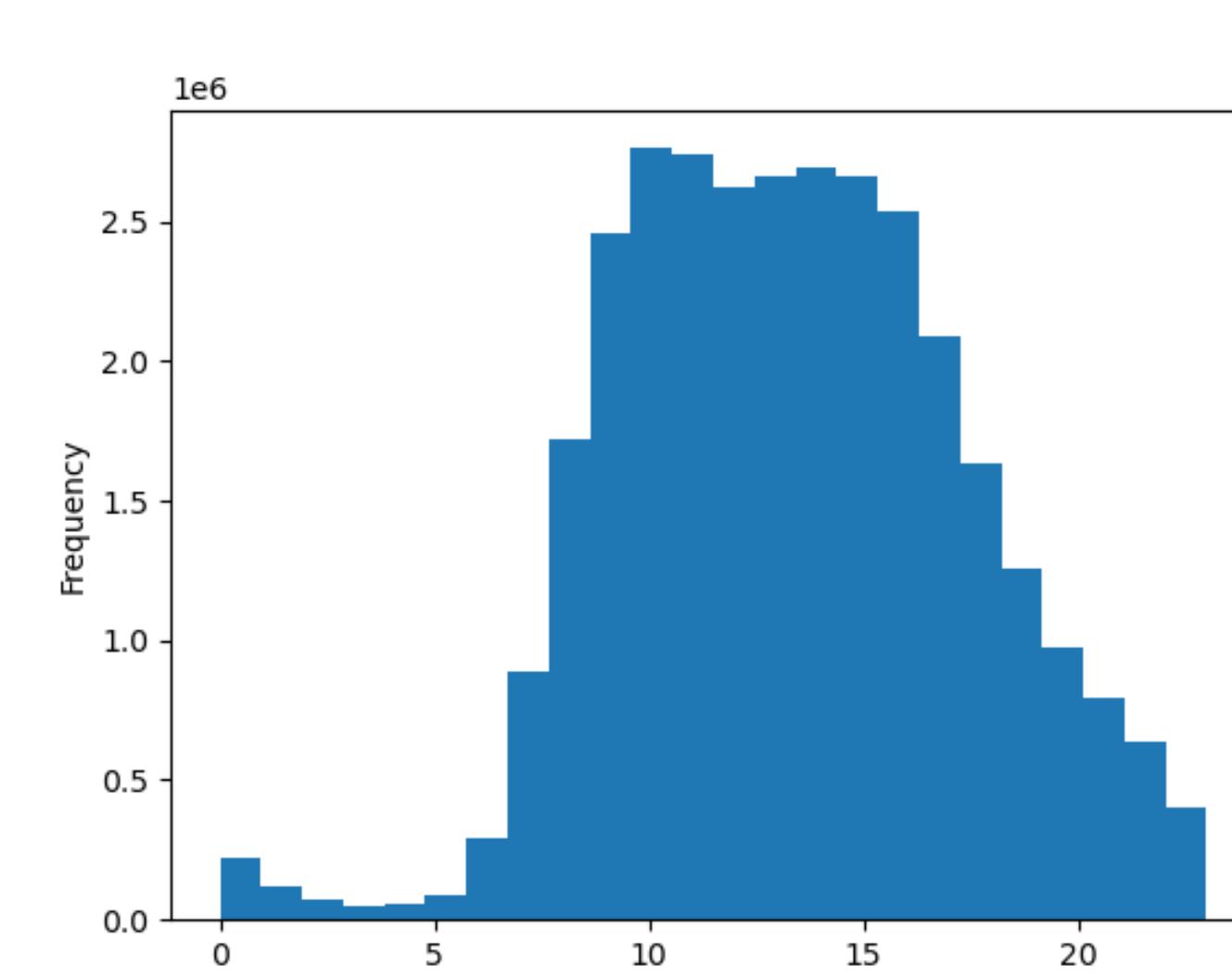


Distribution of Sales over days of week



Saturday and Sunday are the busiest days of the week

Distribution of Sales by hours of the day



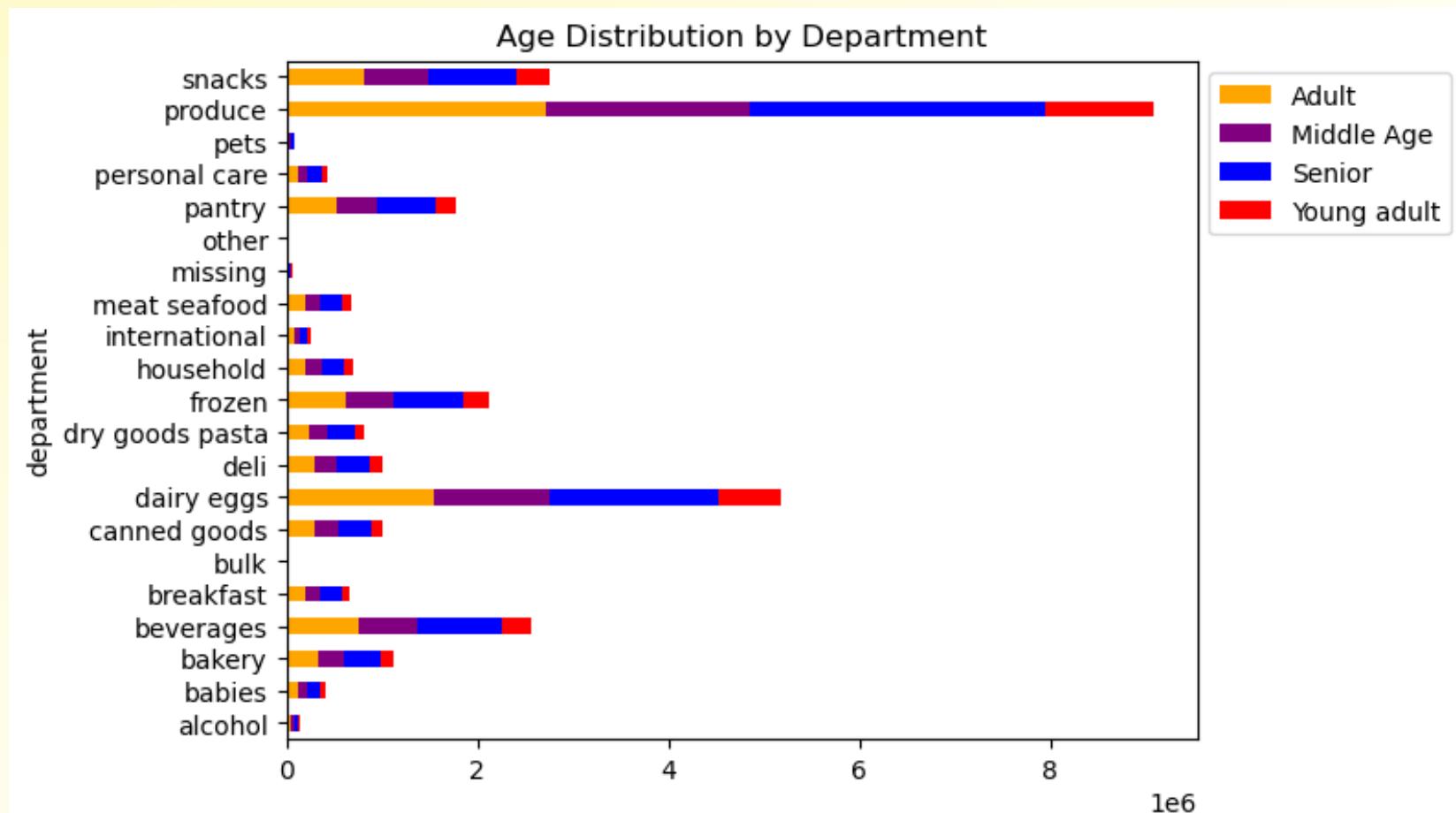
Busiest hours of the day is between 10am-3pm



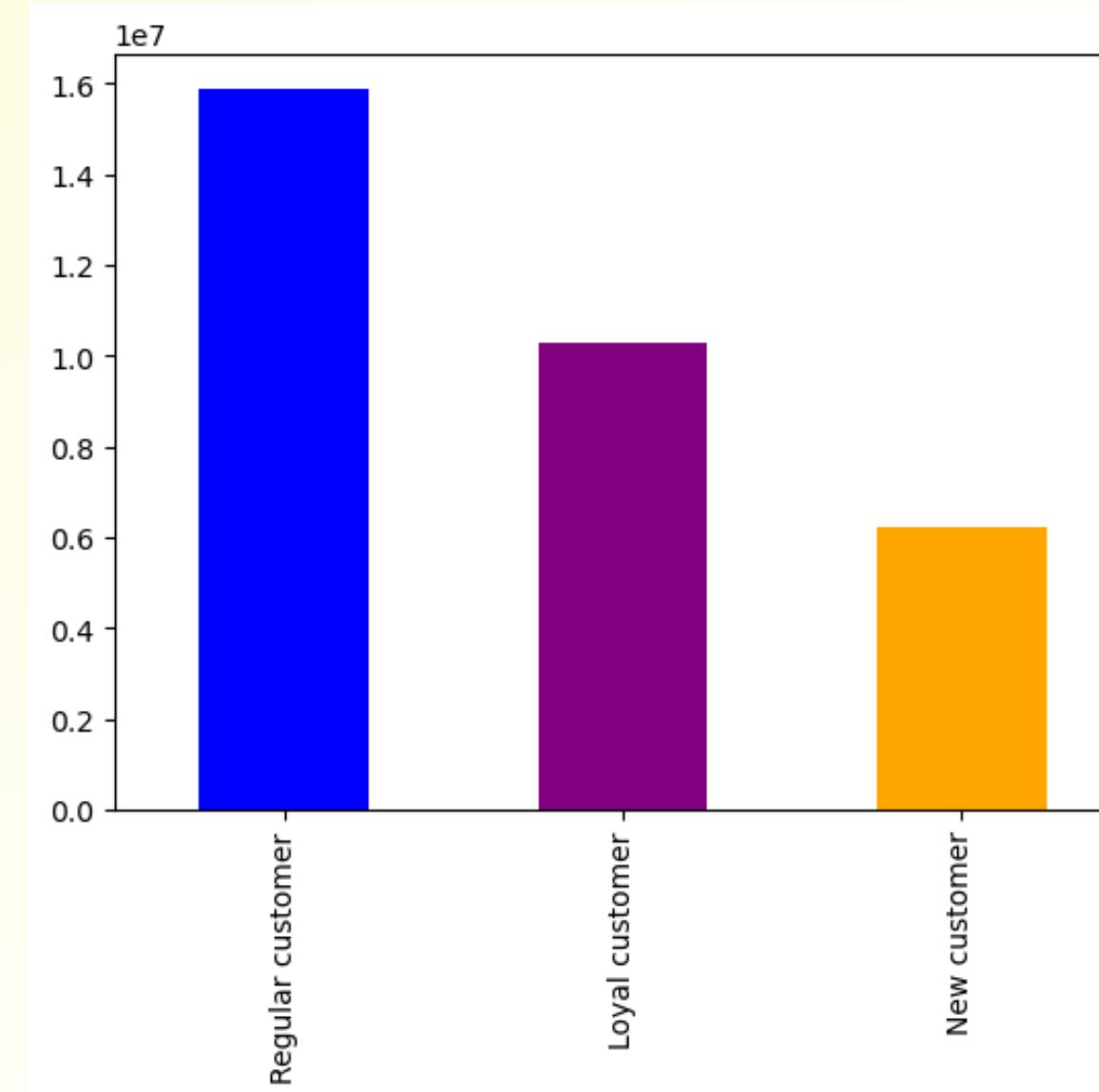
Key insights and findings from data analysis



Distribution of departments by age group

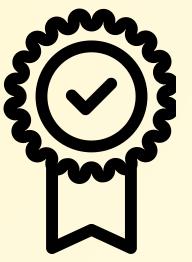


Distribution among customers based on loyalty flag



Saturday and Sunday are the busiest days of the week

Busiest hours of the day is between 10am-3pm



Recommendations based on the analysis

- Optimize the delivery time slot availability based on the busy and slow days. Provide more flexible and varied delivery options during peak days
- Consider offering promotions or incentives during the less busy hours to encourage orders during these periods.
- Develop targeted marketing campaigns that focus on specific customer segments beyond age and family status.



Additional sources



Python Code



Final Report

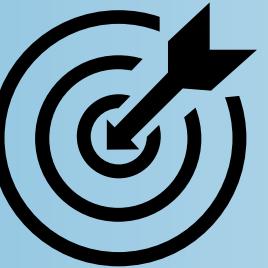


Pig E Bank: Empowering Financial Literacy with a Digital Piggy Bank App





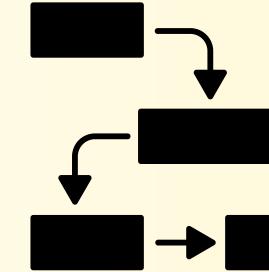
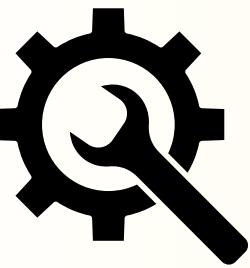
Overview: Predicting Potential Customer Churn in the Banking Industry



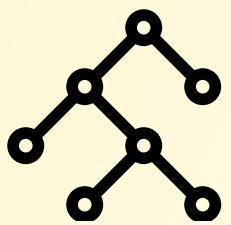
Utilizing Data Mining Techniques to Construct a Decision Tree for Predicting Potential Customer Churn in Banking Industry



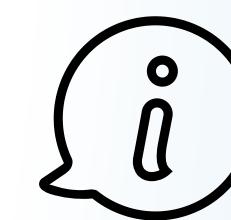
Client Dataset



- Data Cleaning, sorting and filtering
- Data Grouping and Summarizing
- Descriptive Analysis
- Data ethics
- Data mining
- Building a decision tree



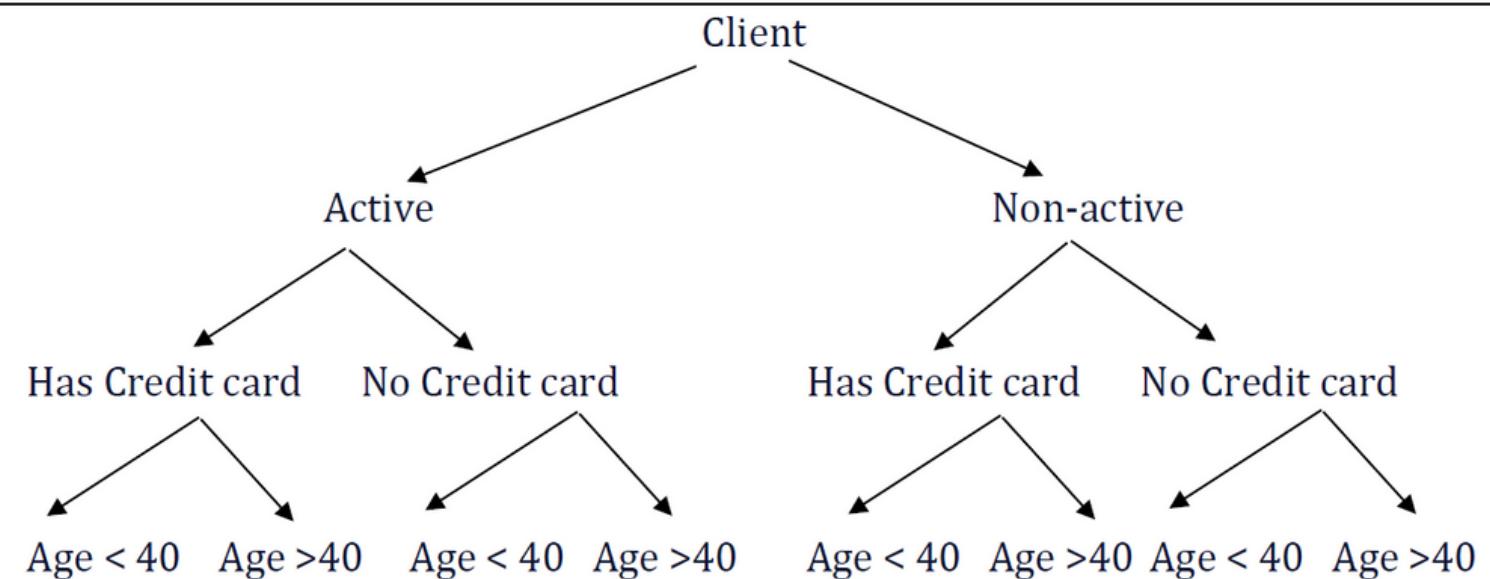
Decision tree analysis



Additional sources



Predicting Customer Churn in Pig E Bank



Low probability

High probability



Data analysis



Immoscout Rental Data Analysis: Insights into Germany's Rental Market



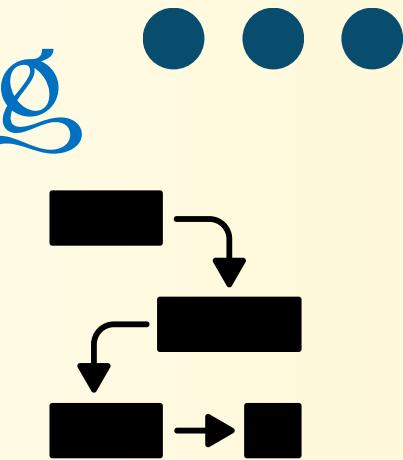
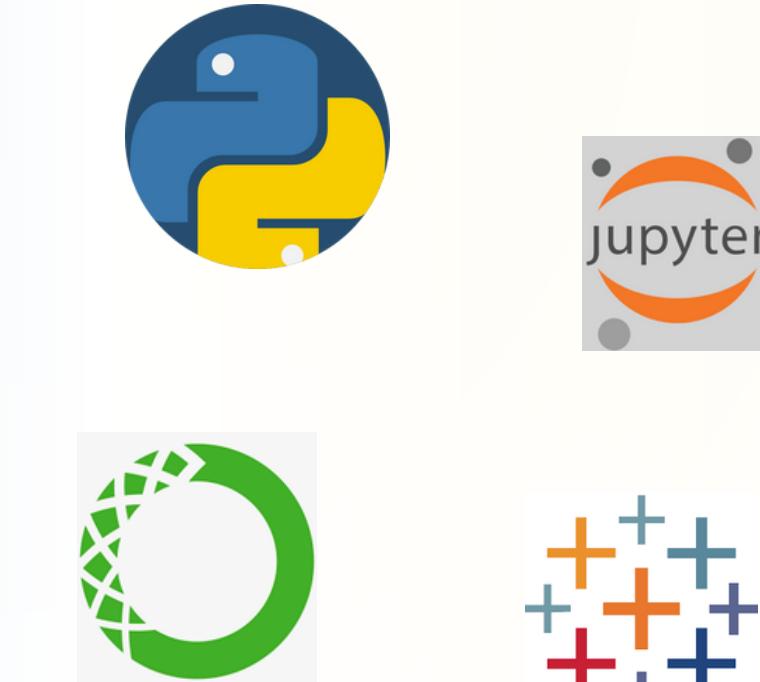
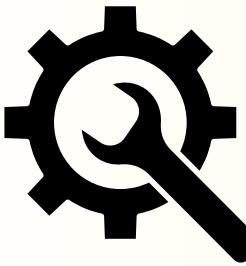
Overview: Analyzing Germany's housing rental data for valuable insights and informed decision-making



To understand the key trends and factors influencing the housing rental market in Germany, providing valuable insights for stakeholders and guiding informed decision-making.



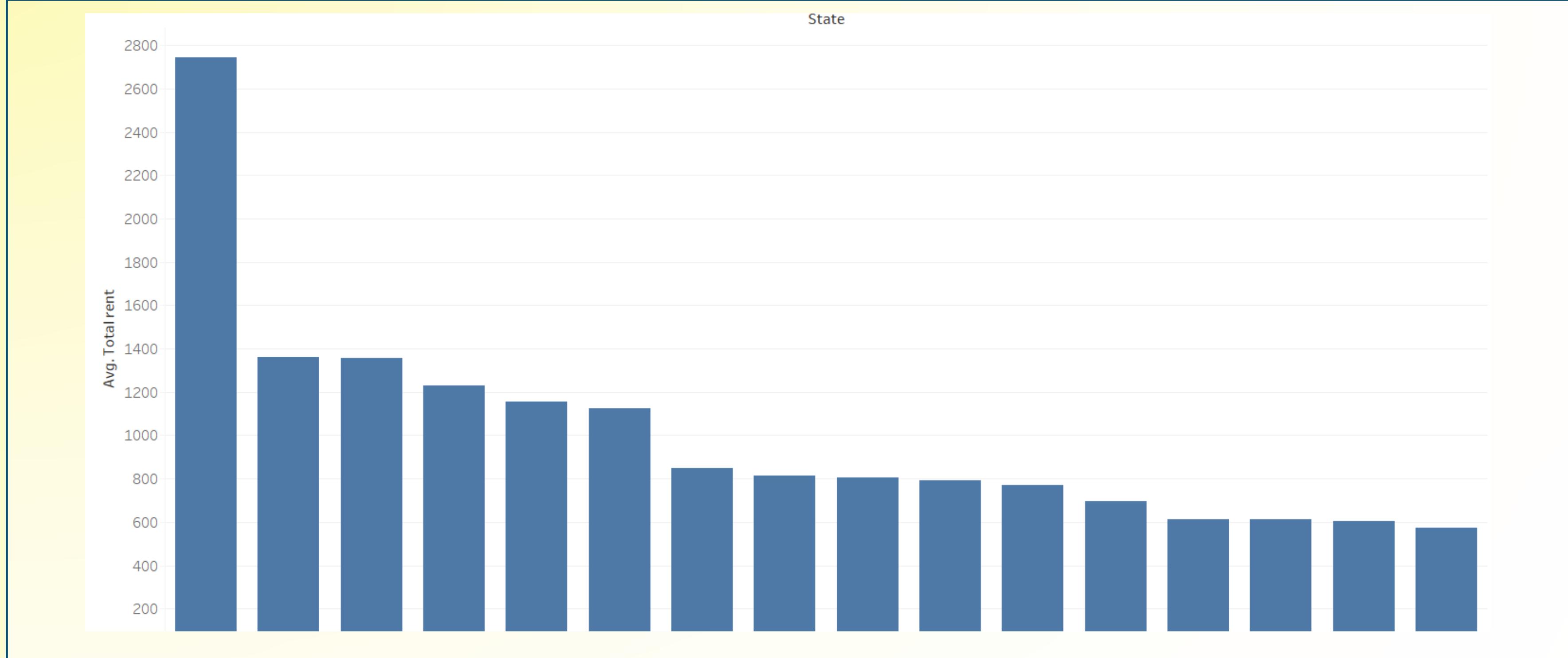
Immoscout Data



- Sourcing open data
- Exploring relationships
- Data Cleaning, sorting and filtering
- Clustering and Regression analysis
- Time series data analysis



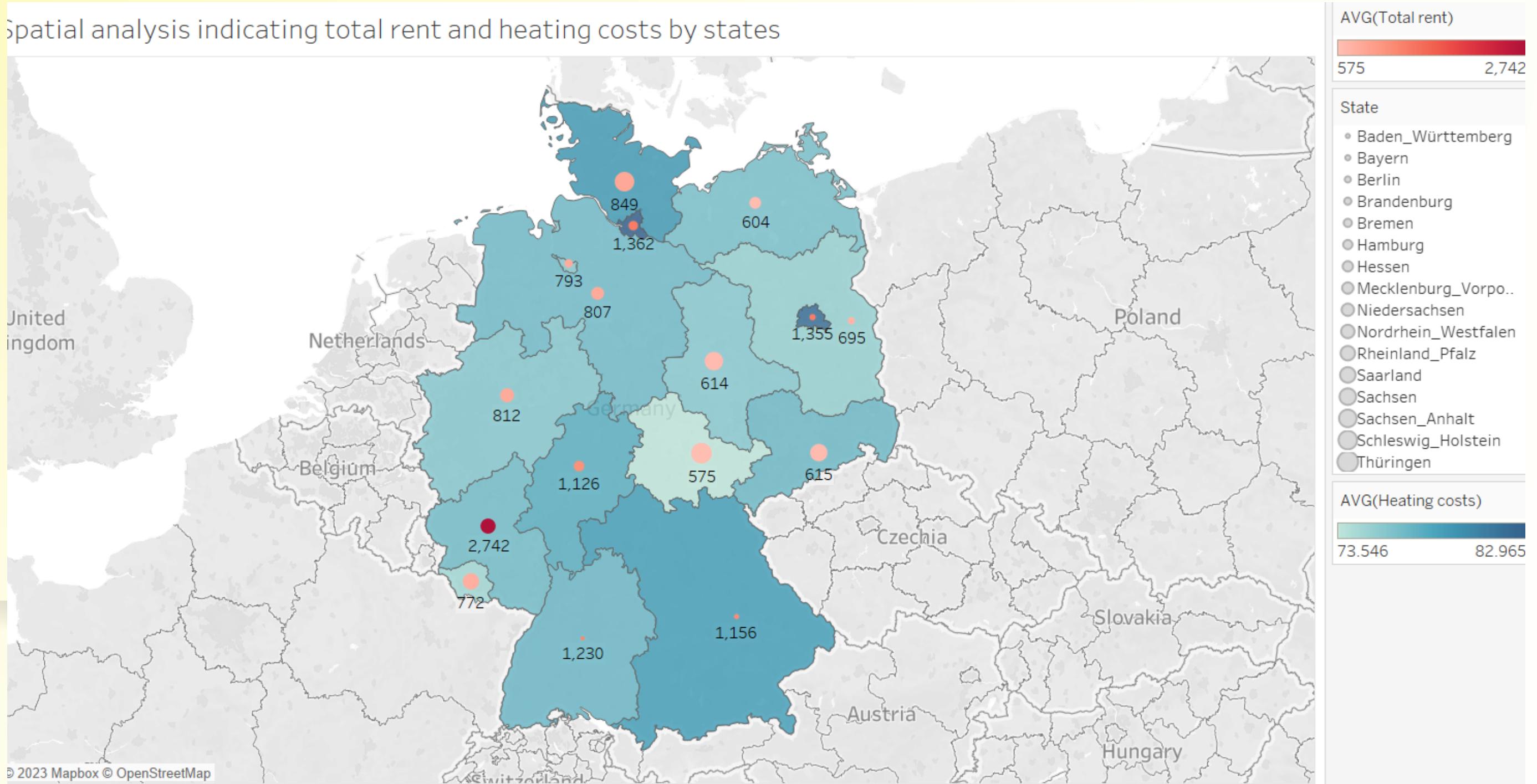
Key insights and findings from data analysis



The top most state indicating the highest average rent is Rheinland Pfalz followed by Hamburg and Berlin



Key insights and findings from data analysis



The rental prices are indicated by circle and the heating costs are indicated by the shading. Rheinland-Pfalz state has the highest rental price followed by Berlin which has higher heating costs and rental prices.



Recommendations based on the analysis



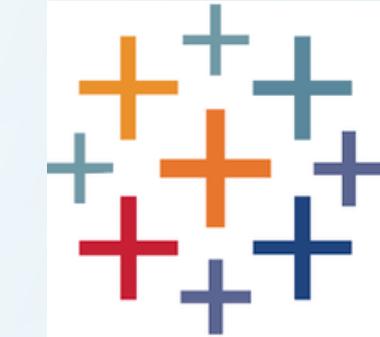
- Prospective renters should consider the impact of location on rental prices and explore regions that align with their budget and preferences.
- For those seeking cost-effective options, considering properties with a moderate number of rooms and living space could lead to more affordable rental options.



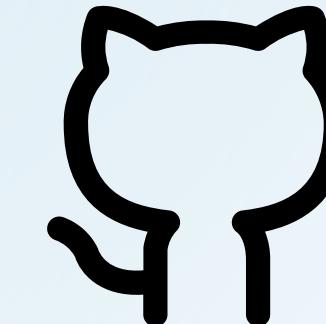
Additional sources



Tableau
Storyboard



Github repository





Thank You For Watching



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