

# Robert Indelicato

## Data Analyst Portfolio

732.915.4785





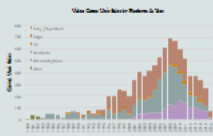
# About Me

My name is Robert, and I am an accomplished Data Analyst skilled in extracting actionable insights from extensive datasets using data-driven approaches to drive growth and propel the business forward.

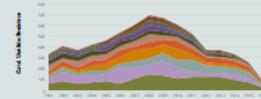
# Introductory Slides – Skillset Analytics

## History of Video Game Sales

Atari was the first gaming platform and started in 1980  
In the Mid-90s Video Games started to ramp up with the advent of the Sony PlayStation  
Since the mid 90s, the three biggest Platform Makers are Sony PlayStation, Microsoft Xbox, and Nintendo

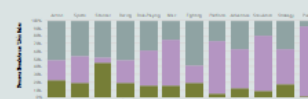


## Game Sales by Genre



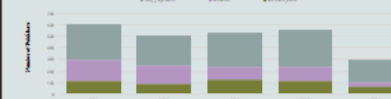
Top three biggest Genres in terms of global unit sales which are Action, Sports and Shooter

## Video Game Sales By Genre



The Sony PlayStation leads in the Top three biggest Genres in terms of global unit sales which are Action, Sports and Shooter.

## Number Of Publishers - Top Three Platforms



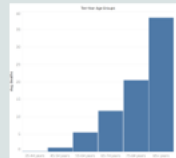
Sony has the most publishers making games for its platforms

## Sales Comparison By Platform- Top Three



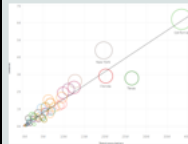
- Sony is the dominant platform as compared to Microsoft and Nintendo
- 2016 has the least sales across the three platforms
- Sony European sales have been trending upward and have surpassed North American sales with the exception of 2016.
- Microsoft & Nintendo sales have been trending downwards
- Japan sales are mostly Nintendo and Sony although sales for both have been trending downward.

## Influenza Mortality Rate by age-group



Influenza impacts the elderly and significantly increases by

## Insights



Correlation of Influenza Death vs. State Population: California, New York, Florida & Texas were amongst the highest death rate.



States with higher per capita influenza death rates should implement more preventive measures

## Insights

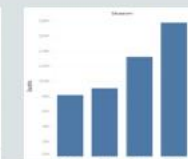


Higher rates to provider ratios in States can result in inadequate medical attention for patients.

## Insights



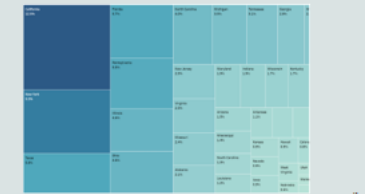
Forecasting model based on the top 5 States: The trend continues into 2018.



Winter has the highest death rates since cold weather affects our borders.

## Mortality Rate by State

Deployment of medical staff prioritized based on States with highest mortality rate.

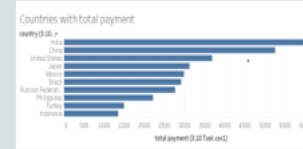


## Customer count in the top 10 countries



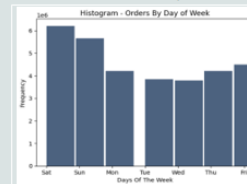
Rockstar customers are spread around the world in 100 distinct countries. The top 10 countries in terms of number of customers.

## Top ten countries with total payment



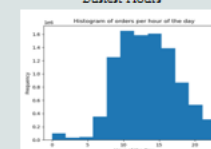
10 countries have revenue greater than 1,000. The top 10 countries in terms of customers are the same top 10 countries with highest revenue.

## Busiest Days



How busy each day of the week according to number of orders. Saturdays and Sundays are busiest days and Tuesdays and Wednesdays are the least busy days.

## Busiest Hours



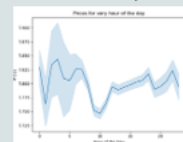
The busiest hours, increase at 9 am until 3pm, when it starts to decrease.

## Customer Profile



Low income young adults come more often than other demographics, however, they do not return as often as others. This is an opportunity to provide incentives, so they come more often and spend more.

## Market Analysis



According to the graph above customers have a higher tendency to spend more between 4 am to 8 am, as well as from 8 pm until 10 pm.

## Decision Tree



# Projects

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1. GameCo - Market Analysis
2. Influenza - Forecasting
3. Rockbuster Stealth - SQL
4. Instacart - Python Analysis
5. Pig E. Bank - Big Data Analysis

# Tools



Microsoft Excel



Tableau



SQL



Python



Github



Jupyter Notebook

# GameCo

Analyzing global video game sales to help understand how GameCo's new games might fare in the market.



# GameCo

## Skills

- Data Cleaning
- Data Grouping and Summarizing
- Descriptive Analysis
- Pivot Table
- Visualization Charts in Excel/PowerPoint

## Data

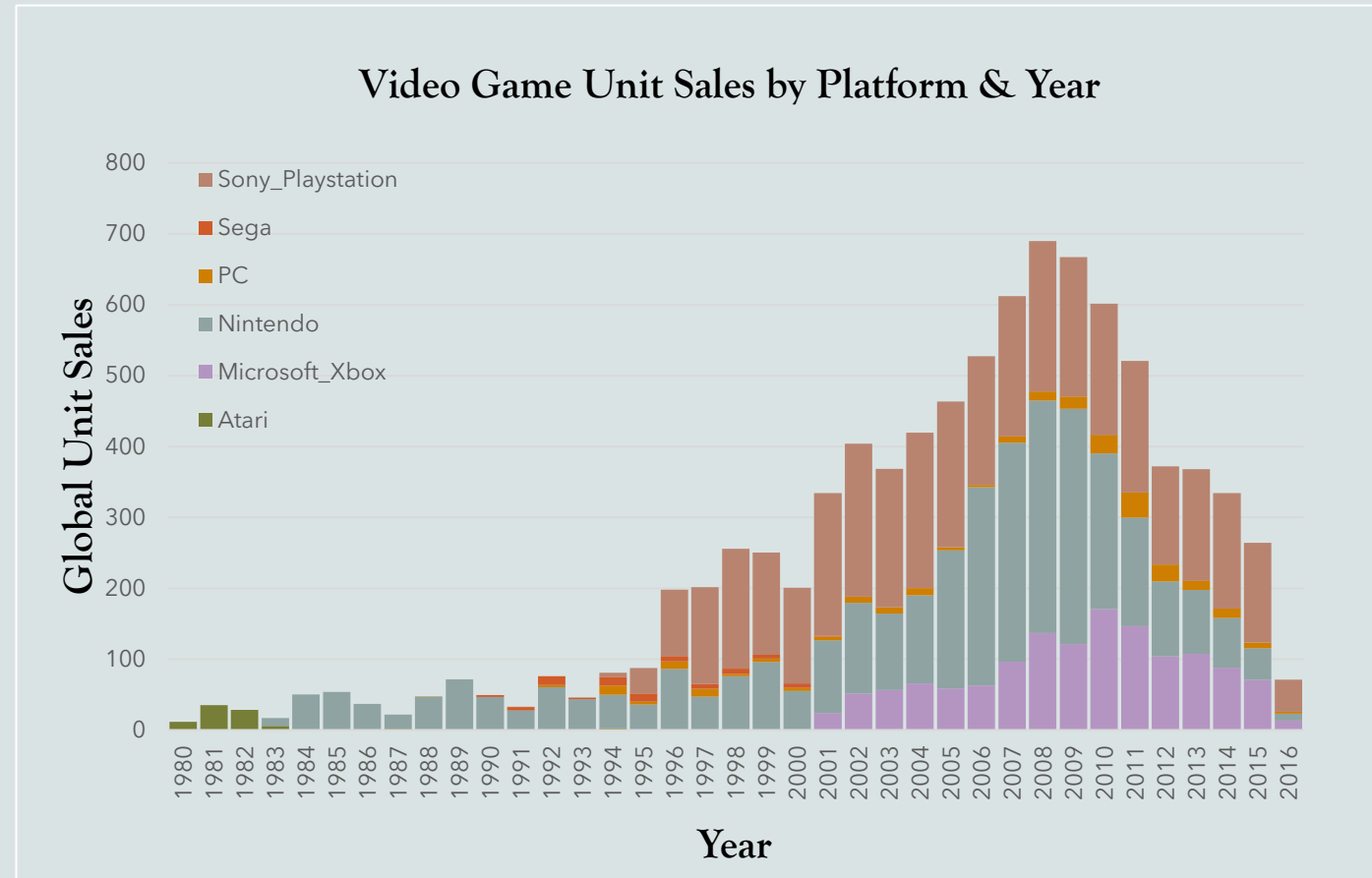
- 16.5K titles.
- Data format - Excel CSV.
- Regions: North America, Europe, Japan and others.
- Information: title, platforms, year, genre, publisher.
- Pivot Tables and Charts.
- Data Source: VGChartz

## Challenges

- Data cleaning, missing data, format issues and standardizing the dataset.
- Lack of recent data.
- Decrease of Sales do not reflect the real numbers due to lack of recent data.

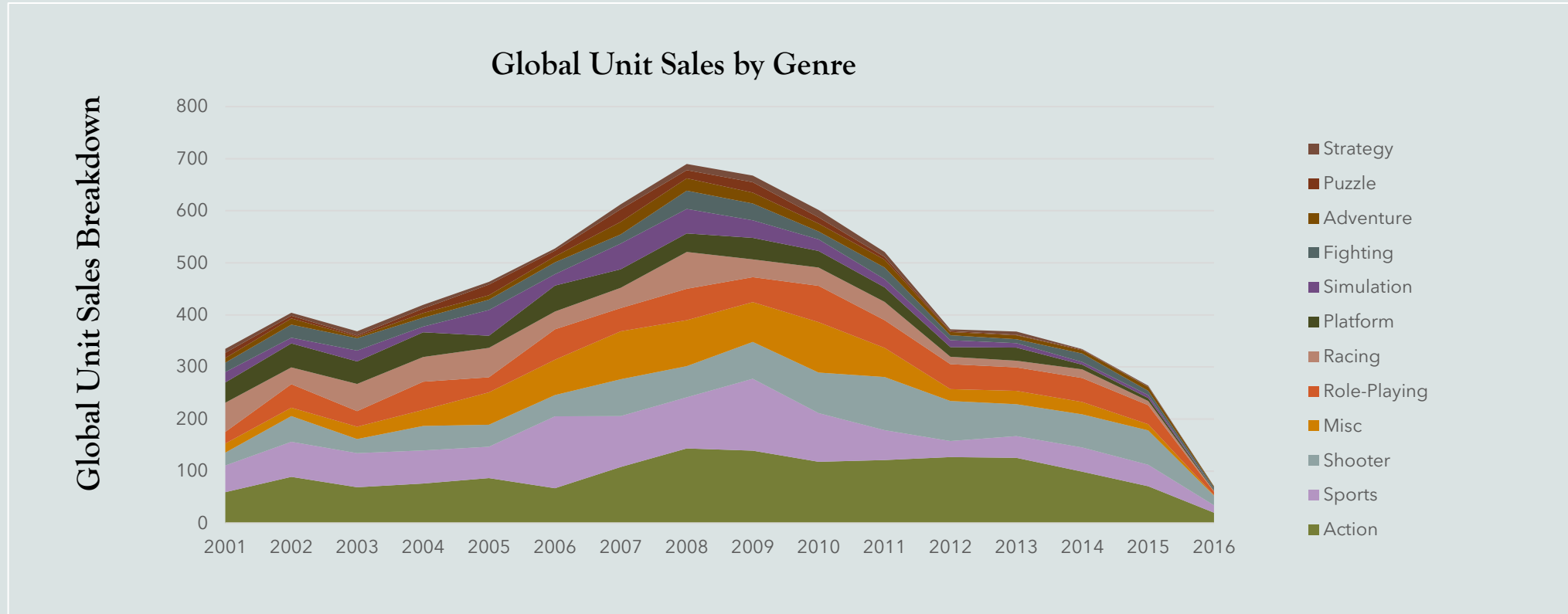
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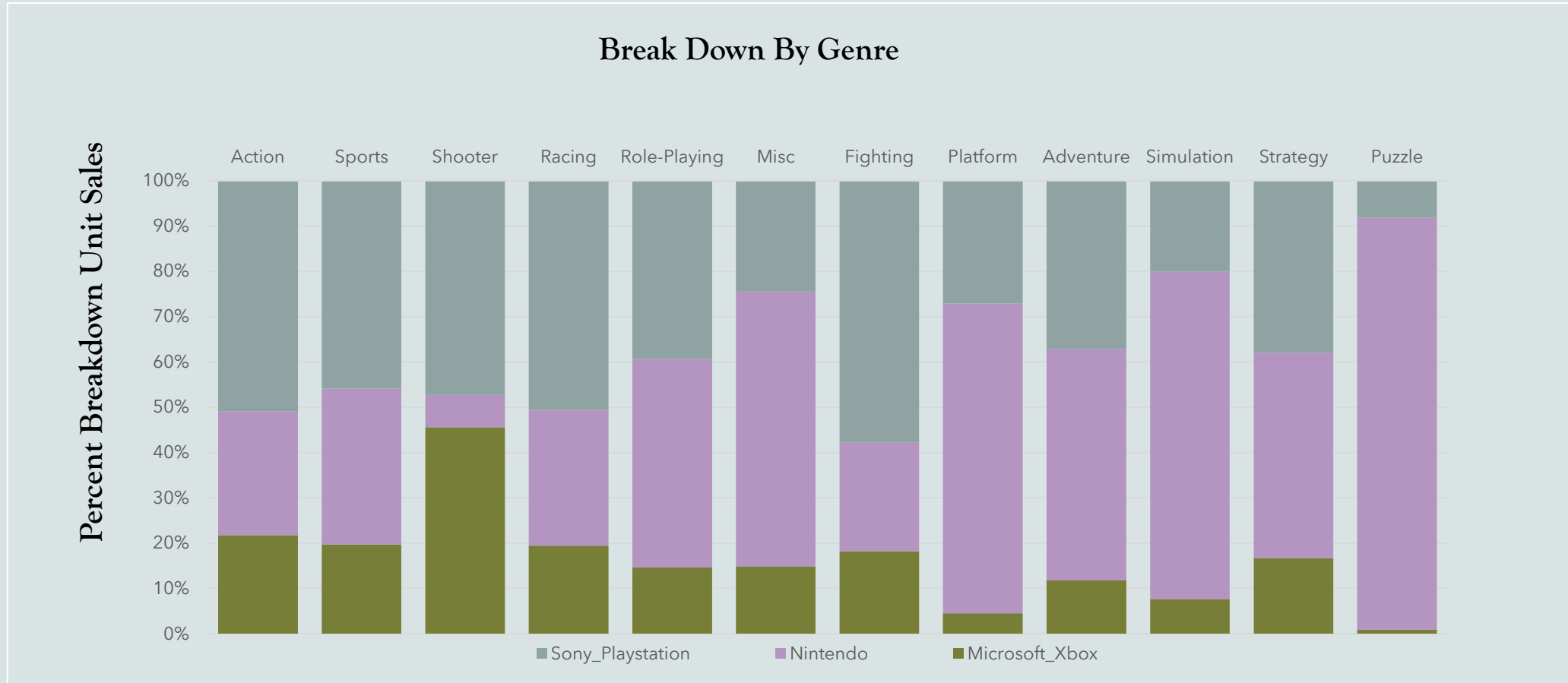


# Game Sales by Genre



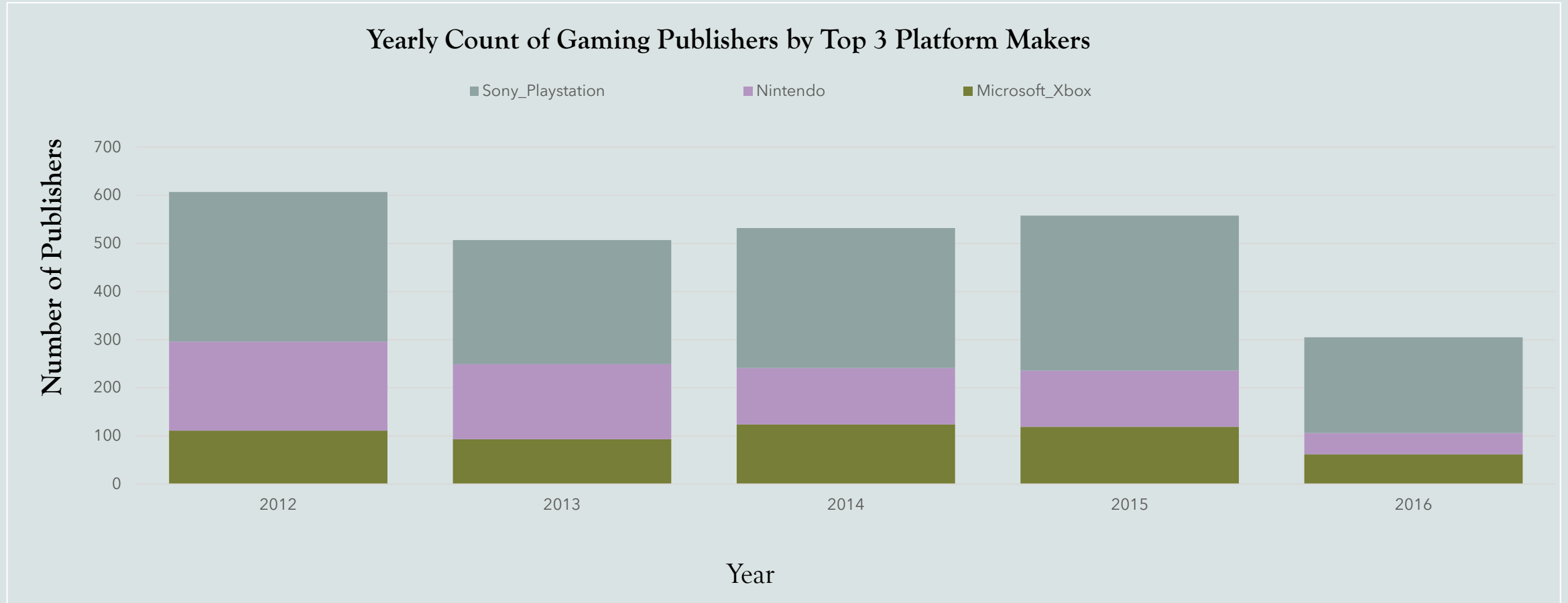
- Top three biggest Genres in terms of global unit sales: Action, Sports and Shooter.

# Video Game Sales By Genre



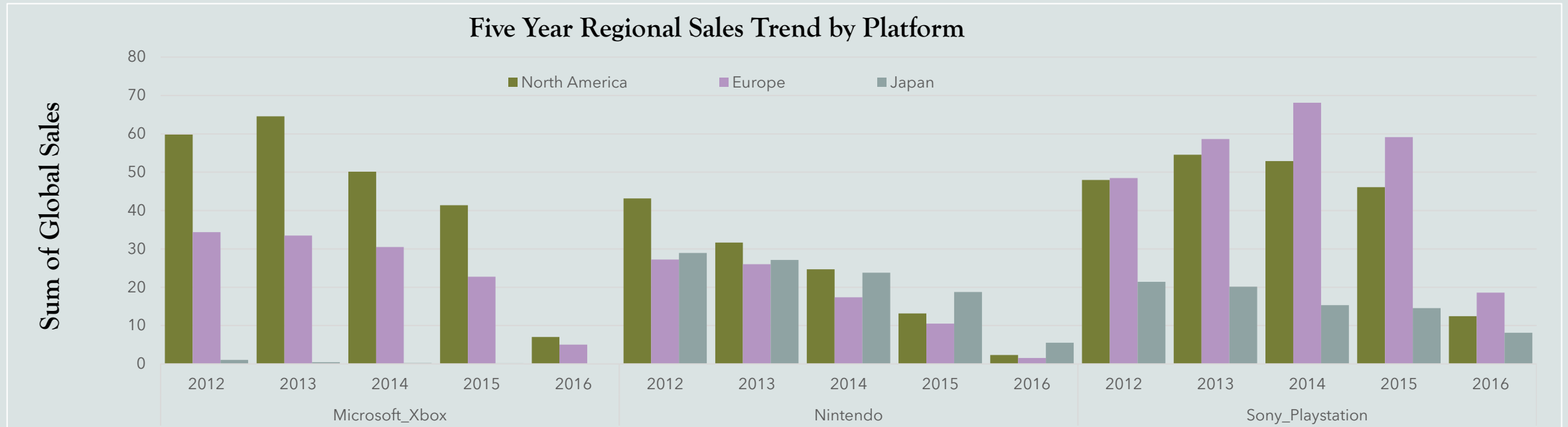
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# Number Of Publishers - Top Three Platforms



- Sony has the most publishers making games for its platforms

# Sales Comparison By Platform- Top Three



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# Summary

- Sony has the most publishers making games for its Platforms.
- Nintendo is losing market share rapidly.
- Although Sales have been on decline across the three major Gaming Platforms since 2008, Sony is the dominant Gaming Platform leading in Sales globally.
- Historically North America has been the largest sales region for Sony however, its European sales have surpassed North American sales in the last several years.
- Action, Sports and Shooter are the top three genres and Sony leads in these categories.
- Sony should continue to focus on European Sales and look into why North American sales are slowly in decline.
- Further investments in the top three genres (Action, Shooter & Sports) may improve sales.

# Influenza Season

Assisting a medical staffing agency in preparing for influenza season by analyzing trends to proactivity plan staffing needs nationwide.



# Influenza

## Skills

- Data cleaning, integration and transformation
- Data Profiling and Integrity
- Statistical hypothesis
- Testing
- Tableau/Visual analysis
- Forecasting

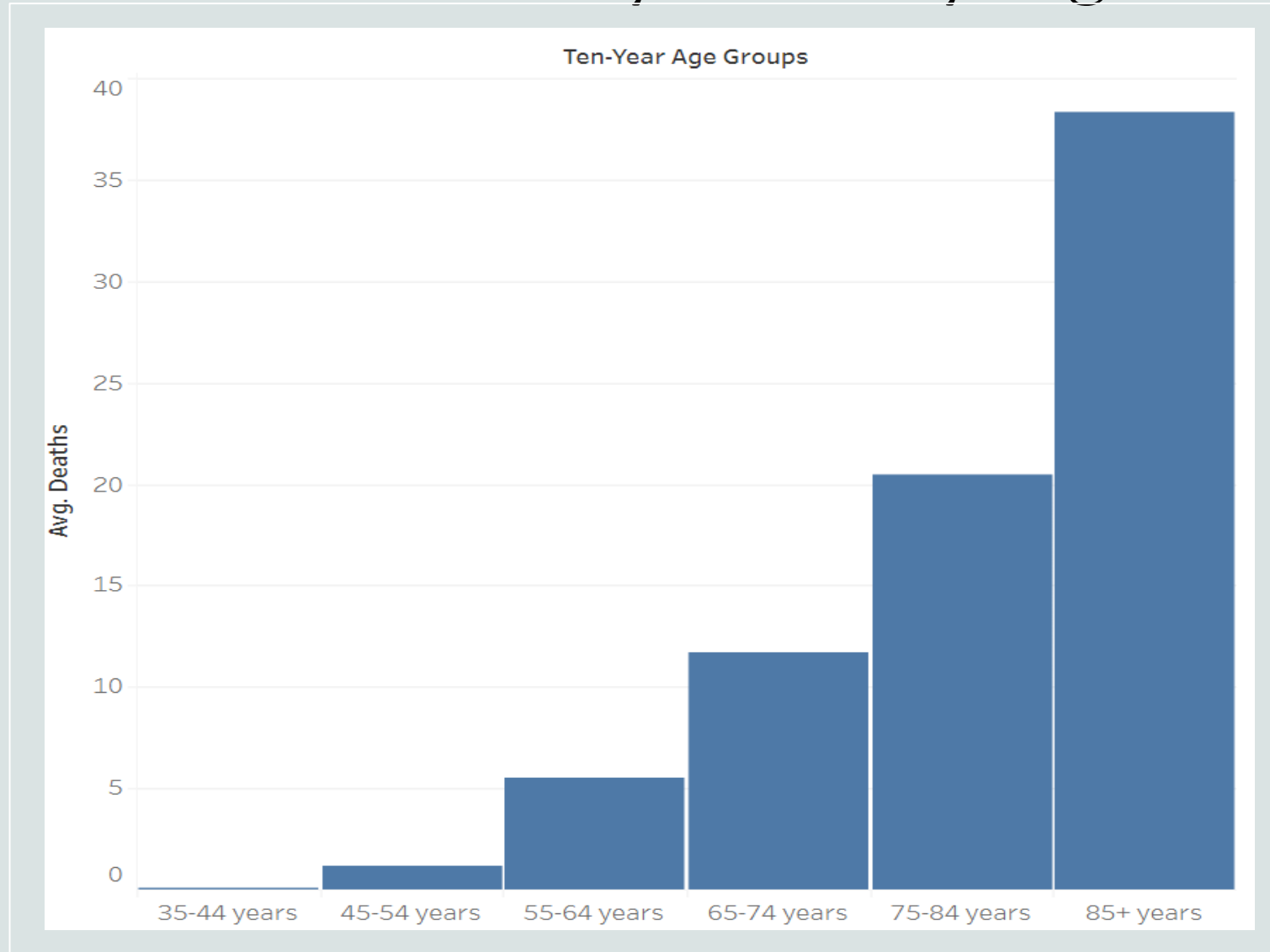
## Data

- Data format - Excel CSV.
- Regions: North America.
- Pivot Tables and Charts.
- Population Data - US Census Bureau
- Influenza Deaths - By CDC
- Influenza Visits Data Set - By CDC
- Influenza Lab Test Data Set - By CDC
- Survey of Flu Shots in Children - By CDC

## Challenges

- Data cleaning, missing data, format issues and standardizing the dataset.
- Possible notice omitted info as raw data has 8% not stated and 81% as suppressed, thus info was limited to elderly, even though vulnerable group involves wider category of people.

# Influenza Mortality Rate by Age-Group

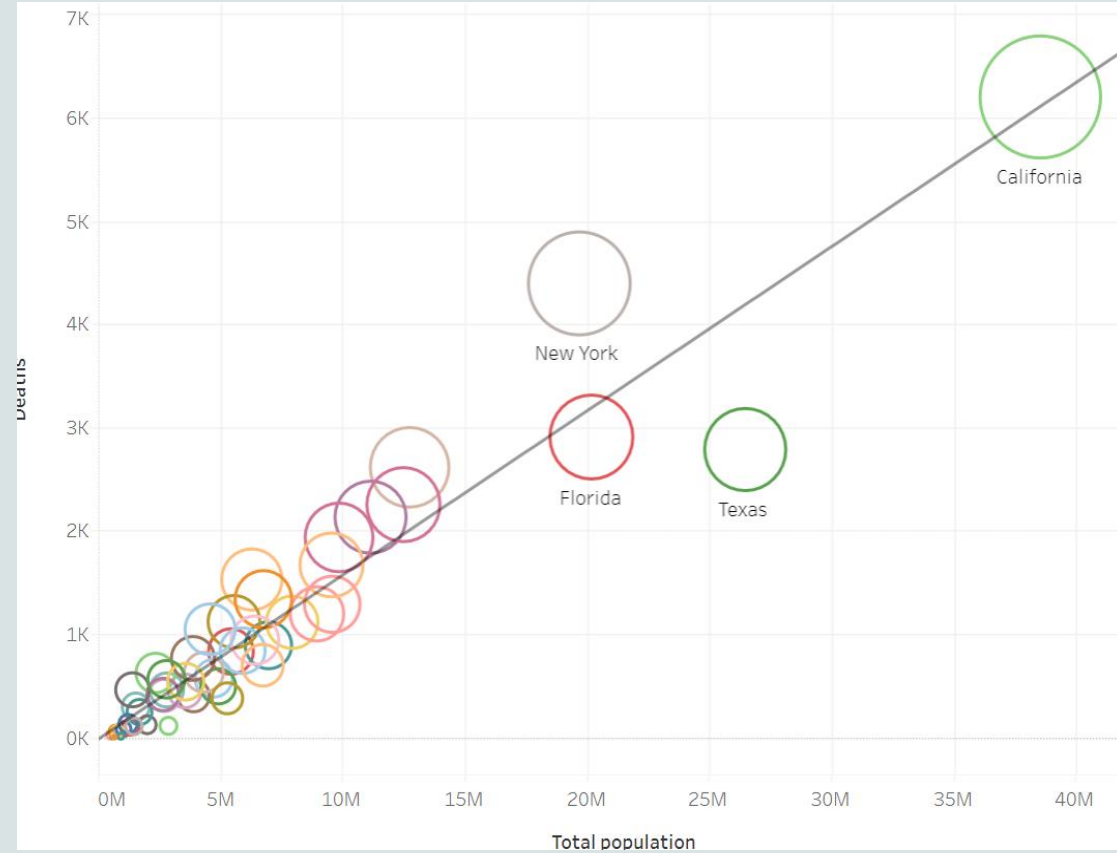


The impact from Influenza significantly increases with age.



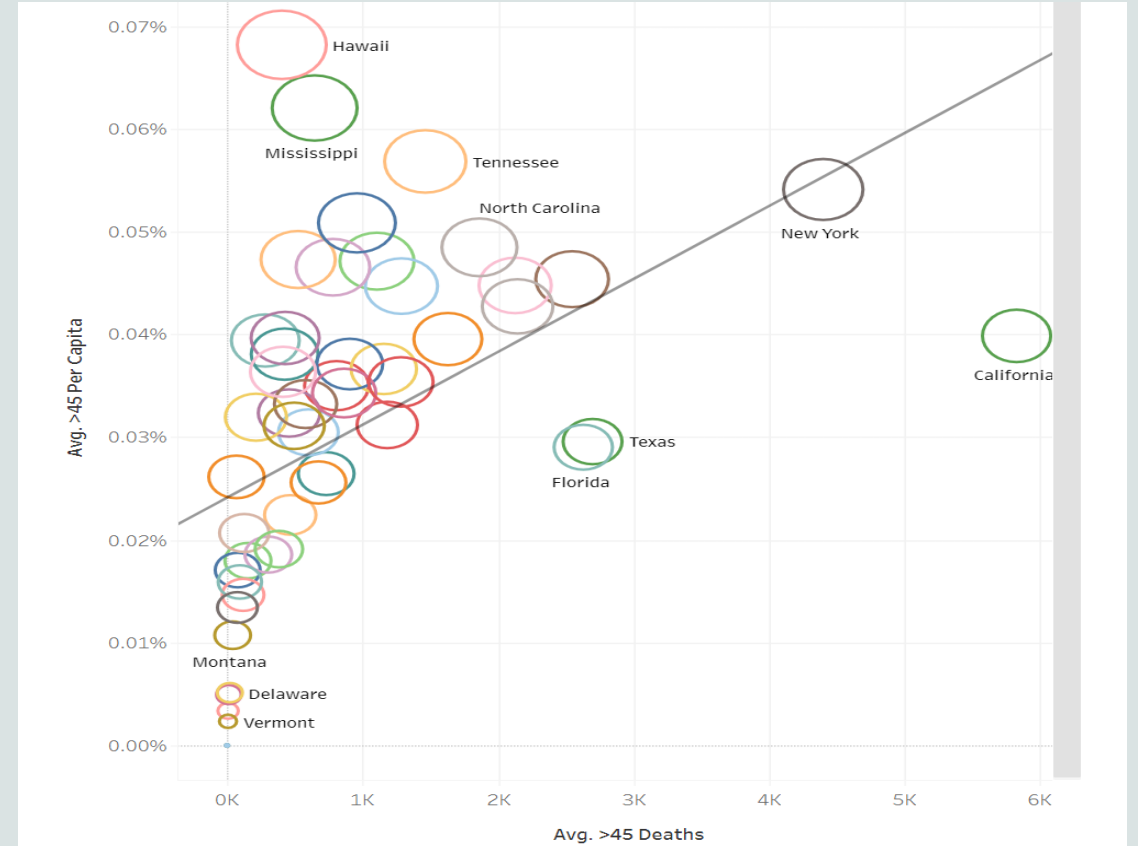
# Insights

## Influenza Death vs. State Population



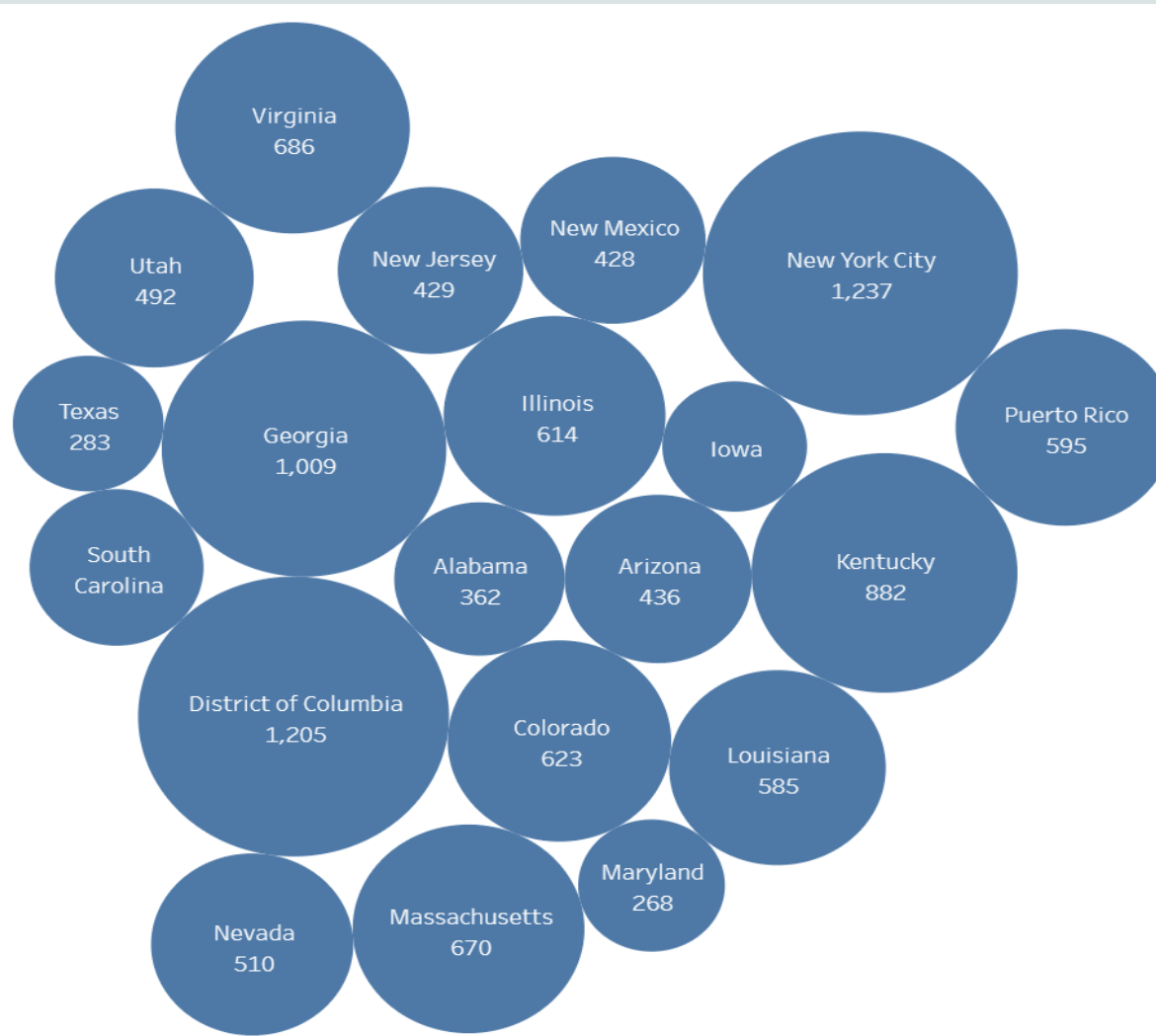
California, New York, Florida & Texas were amongst the highest death rate.

## Per Capita Influenza Deaths By State



When viewing States on a per capita death rate, Hawaii & Mississippi rank amongst the highest.

## Patient To Provider Ratios

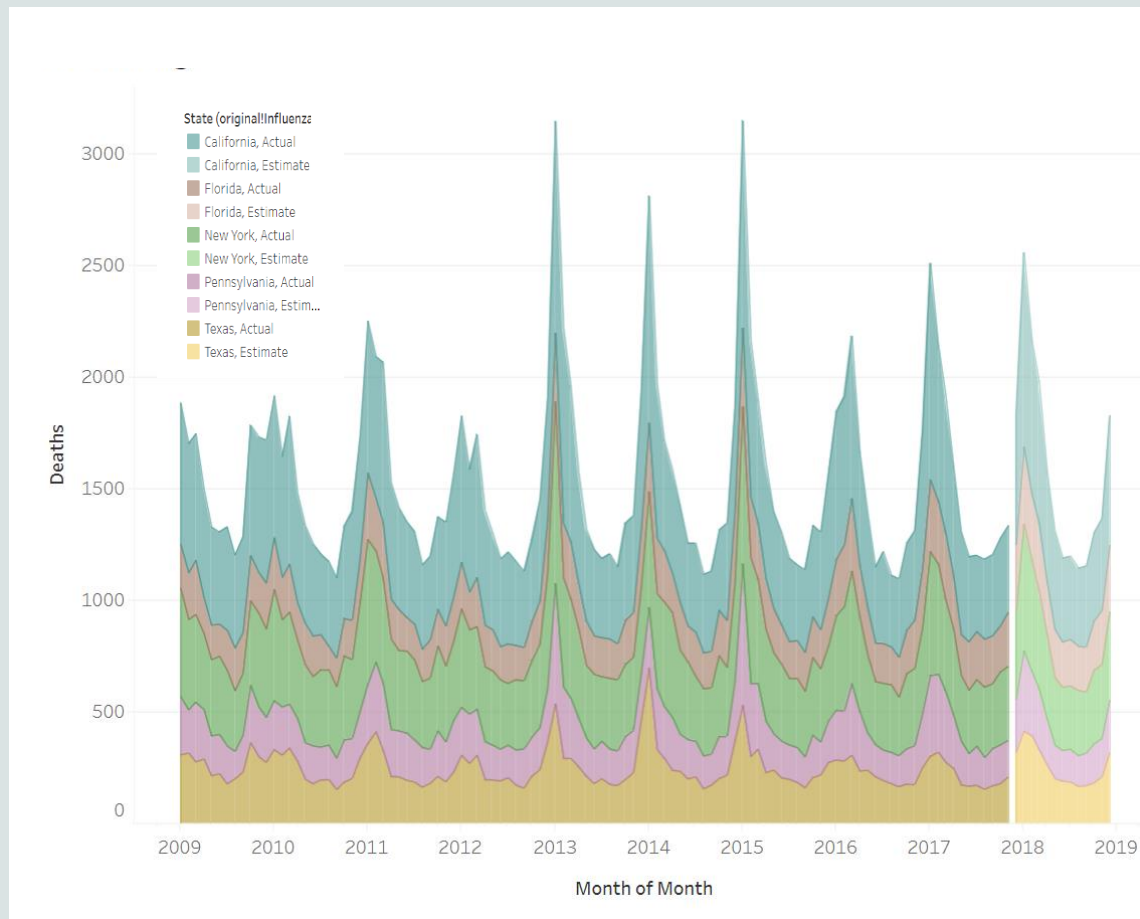


Average Patient to provider ratio 382

Higher patient to provider ratios in States can result in inadequate medical attention for patients.

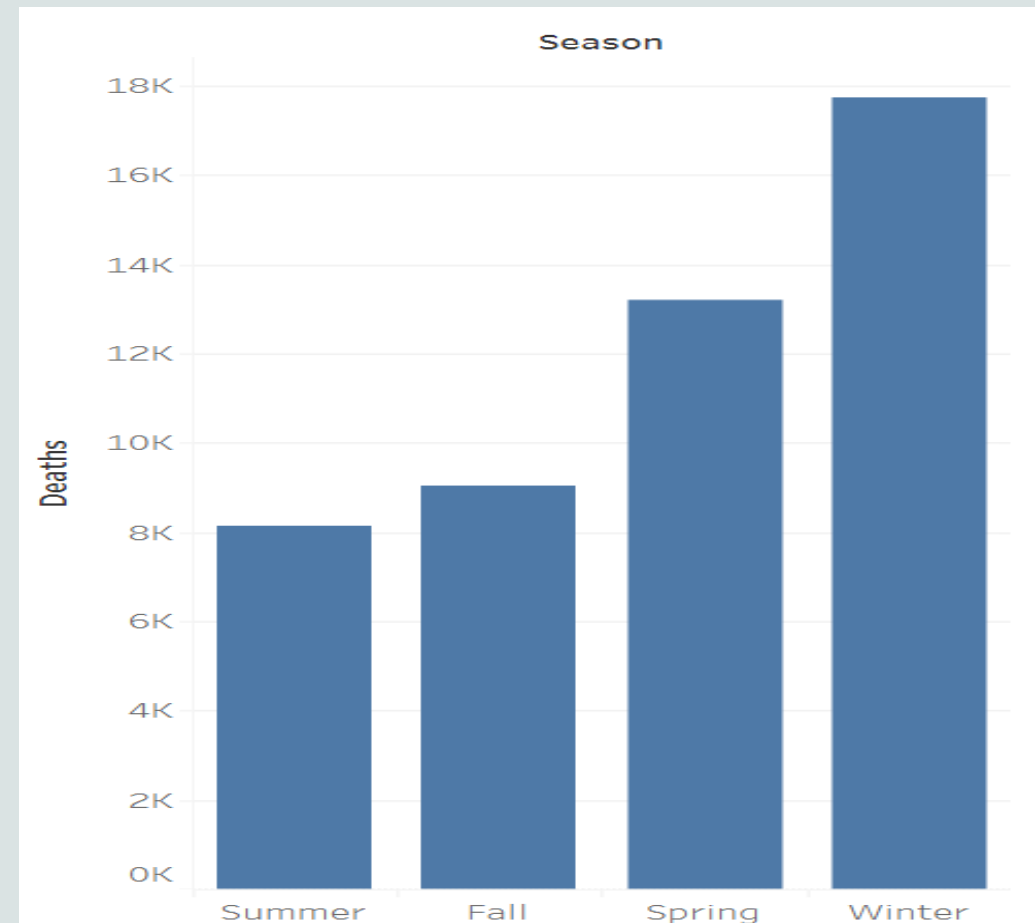
# Insights

## Forecasting Top 10 States: Influenza Deaths



The trend continues into 2018.

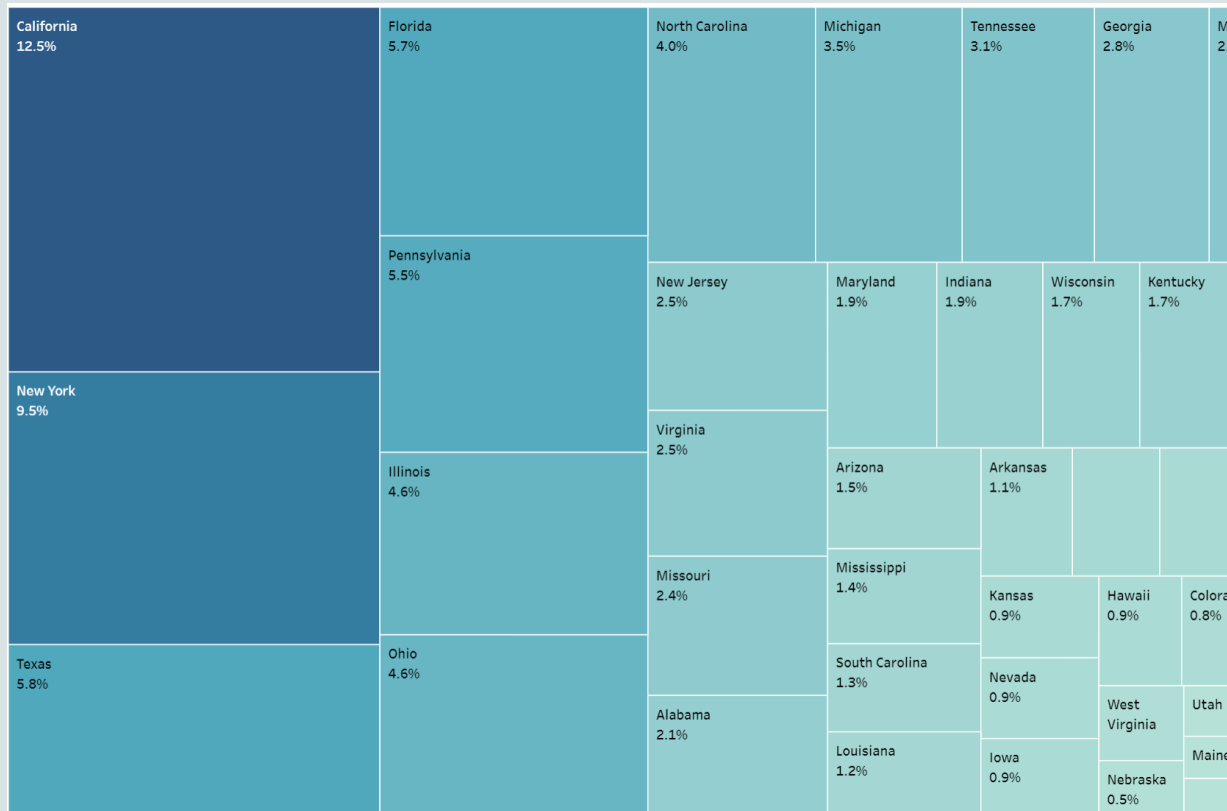
## Death Rate Count By Season



Winter has the highest death rates since cold weather affects our bodies.

# Mortality Rate by State

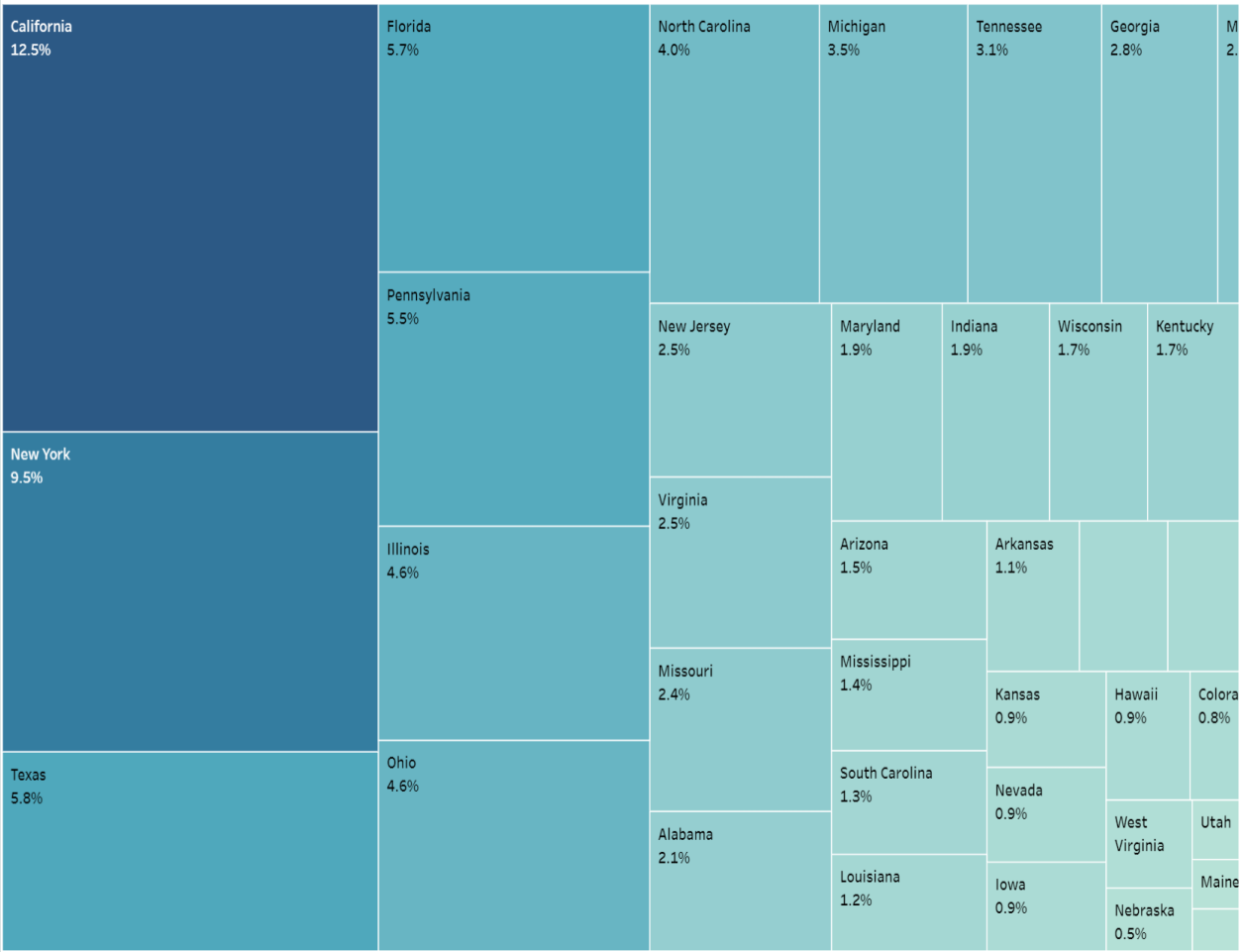
Deployment of medical staff prioritized based on States with highest mortality rate.



# Recommendations

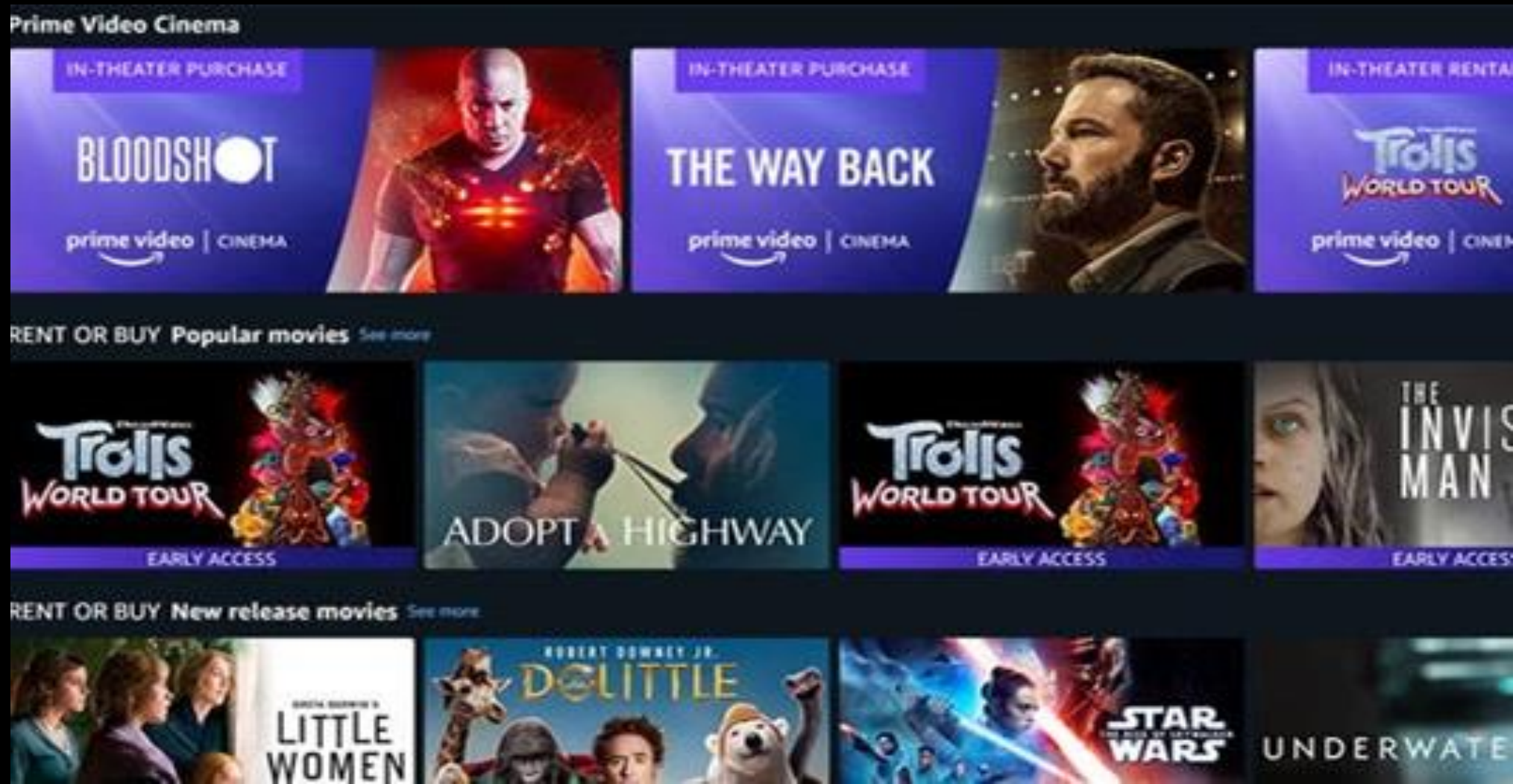
Influenzas ranks within top 10 for the highest mortality rate and particularly increases with age. Efficient deployment of medical staff & resources can help to flatten the curve and improve patients care. I recommend several proactive measures:

- Deploy medical resources to States based prioritized by Influenzas Death Rate outlined in the tree map.
- Increase flu shots in States with higher per capita death rate during the CDC recommended months of September and October.
- Improve patient care by increasing the number of providers to States with a higher patient-to-provider ratio



# Rockbusters

Analyze Rockbuster's data through SQL queries for the launch strategy of the new online video service.



# Rockbuster

## Launch Strategy Analysis

### Data

- Data format - SQL.
- Regions: International.
- Develop a relational database.
- Schema
- Performing subqueries
- Data Source: Project Brief

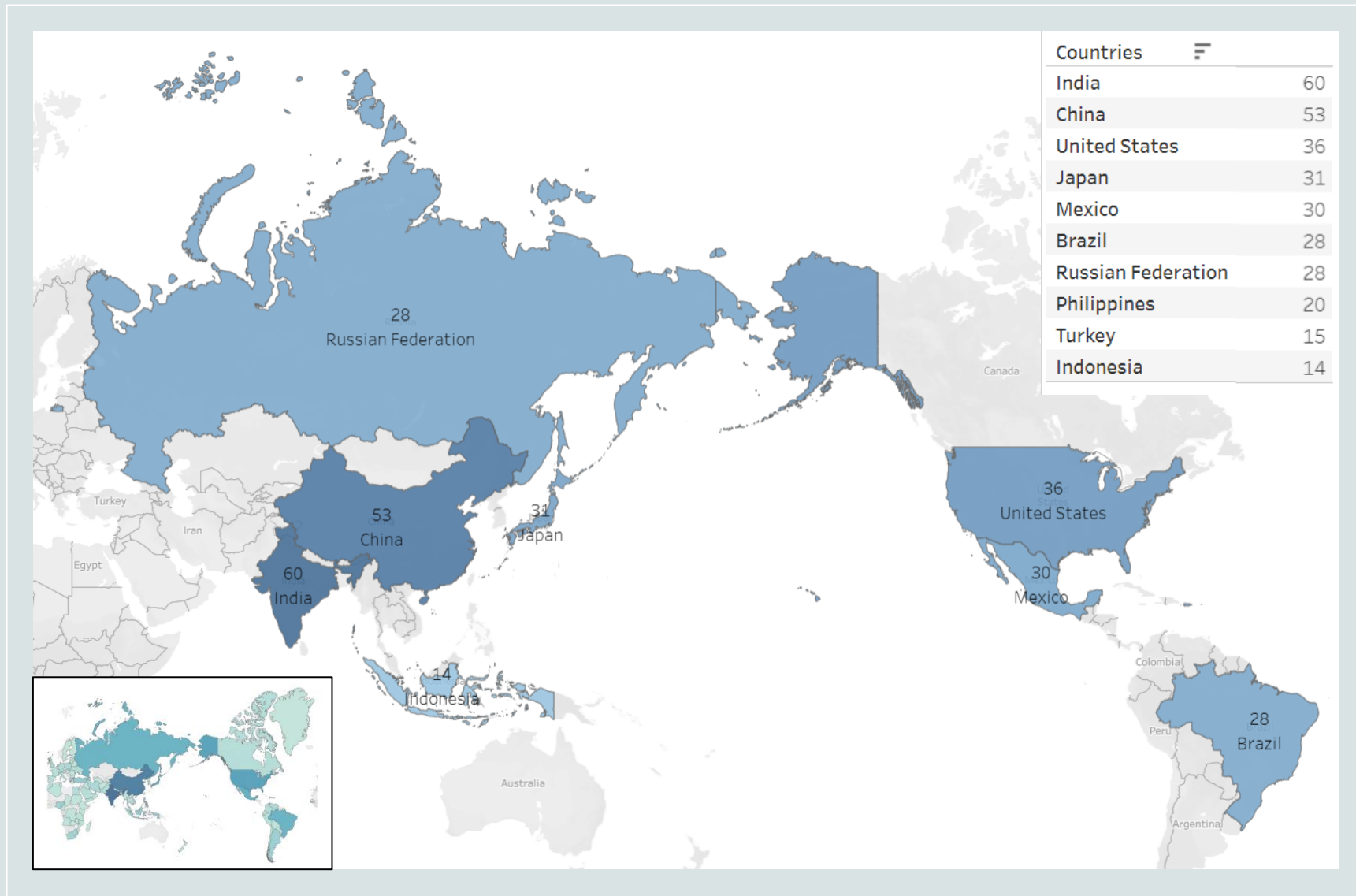
- SQL
- Database querying
- Filtering
- Cleaning and summarizing
- Joining tables
- Subqueries
- Common table expressions

### Challenges

- Data cleaning, missing data, format issues and standardizing the dataset.
- Does not provide info related to historical data or that would allow a market trend analysis or forecast.



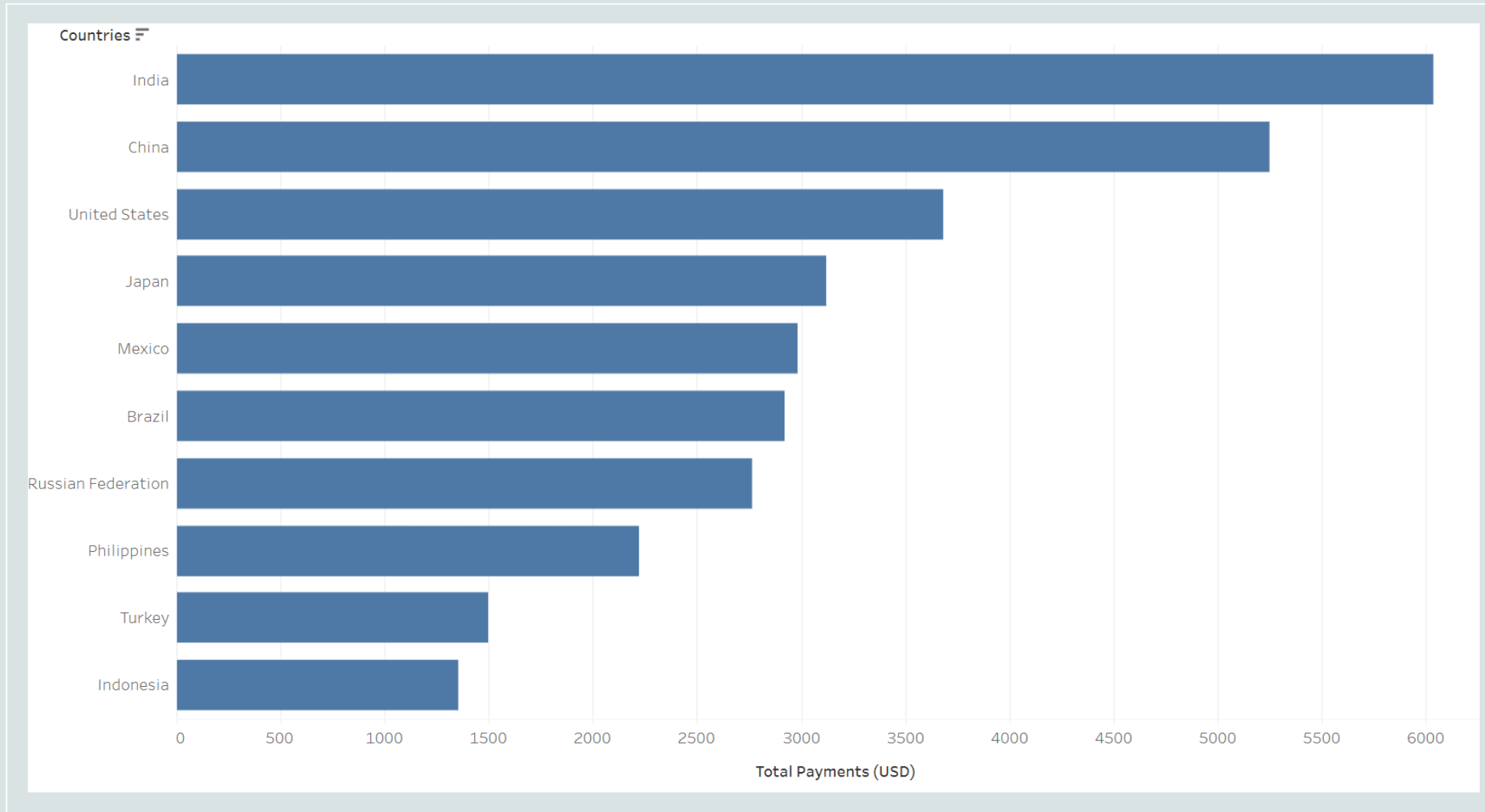
# Customer Count For The Top 10 Countries



Rockbuster customers are spread around the world in 108 distinct countries. These are the top 10 countries in terms of number of customers.



# Top Ten Countries With The Highest Total Payments



10 countries have revenue greater than \$1,000. The top 10 countries in terms of customers are the same top 10 countries with higher revenue.

# Recommendations

- Strategic promotion and engagement: Offer targeted discounts on highest-grossing movies year-round. Especially key markets like India, China, USA to attract new audiences and foster loyalty. Introduce personalized discounts on online accounts sign ups to enhance customer retention.
- Focus on high quality content: Prioritize top performing movies and discontinue underperforming one to streamline the content library. Ensure consistent focus on quality title that resonate with diverse customer bases.

# Instacart Basket

Derive insights and suggest strategies for increasing sales based on exploratory analysis



SAMPLE FOOTER TEXT

# Instacart Basket

## Skills

- Python Libraries - Pandas & Numpy
- Visualization with Python - Seaborn, Matplotlib & Scipy
- Jupyter Notebook
- Data wrangling and merging
- Deriving variables
- Grouping & Aggregating data

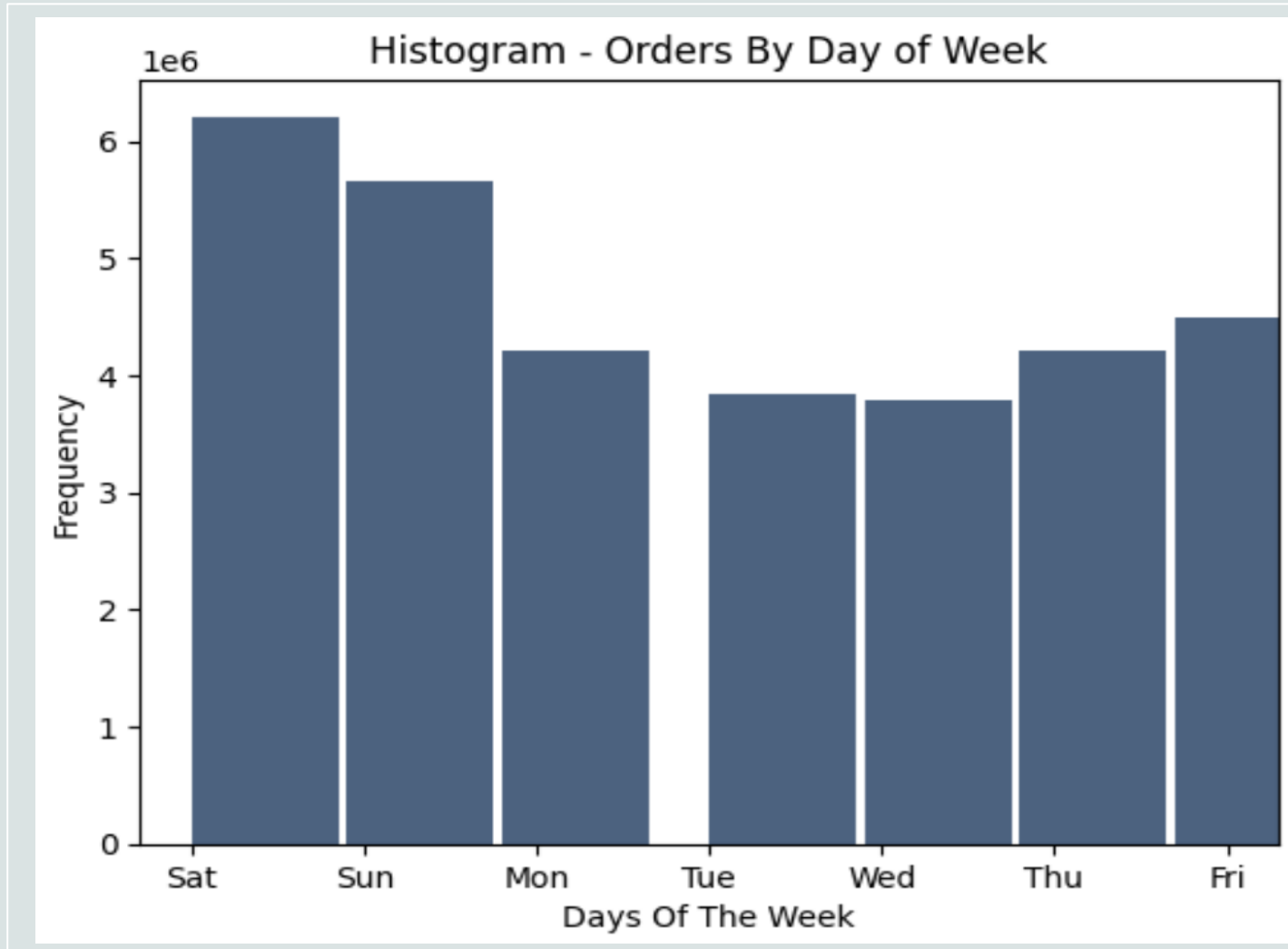
## Data

- Data format - Excel
- Python Libraries - Pandas and Numpy
- Data Wrangling and Subsetting
- Data Consistency Check
- Combining and Exporting Dataframe
- Customer Data set - By CareerFoundry
- Instacart Data Set - Via Kaggle

## Challenges

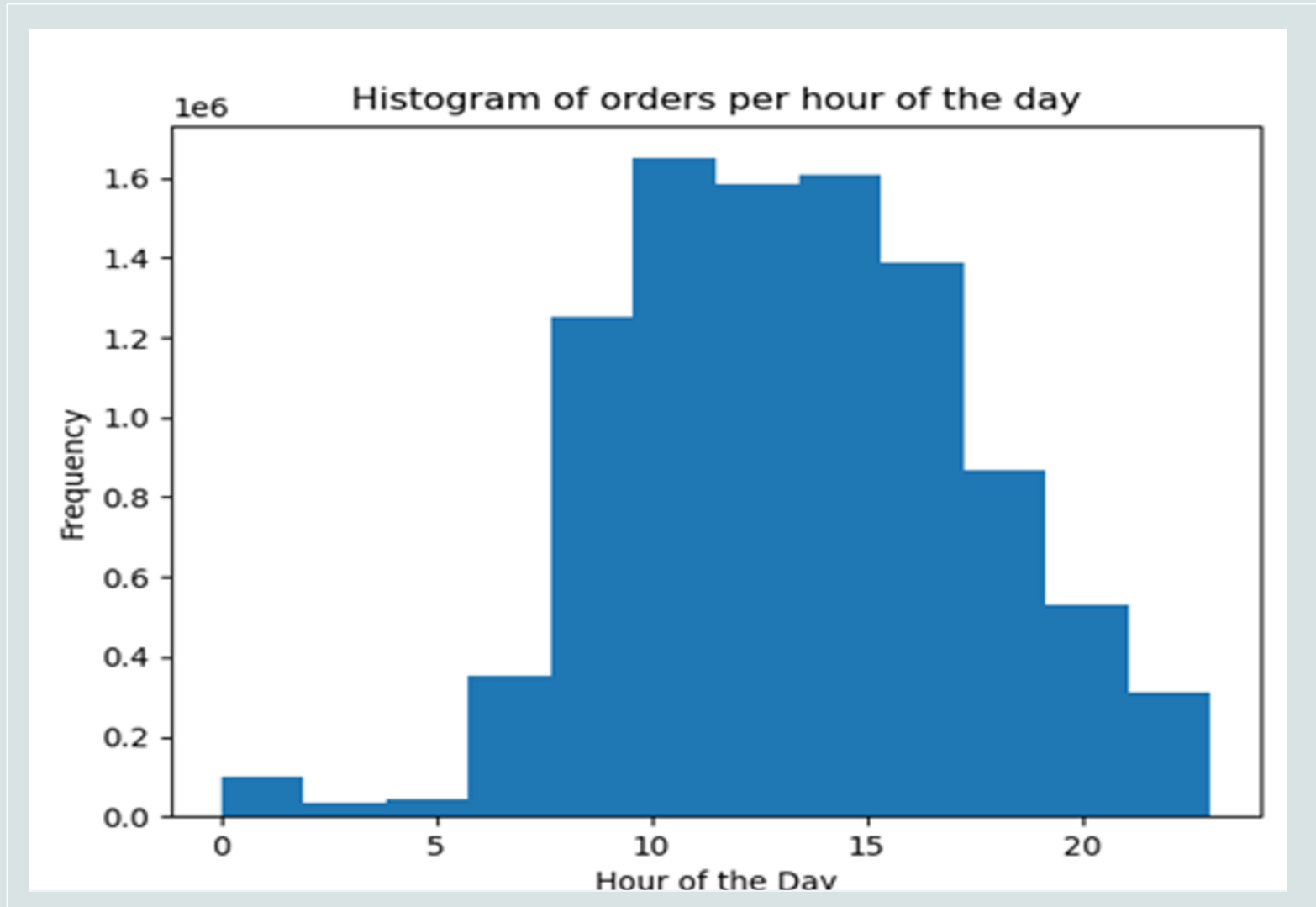
- Data cleaning, missing data, format issues and standardizing the dataset.
- The data has time limitation, since comprise information from 2017 only. The customer data provided by CareerFoundry was fabricated and used for the solo proposes of study.

# Busiest Days



How busy each day of the week according to number to number of orders..  
Saturdays and Sundays are busiest days and Tuesdays and Wednesdays are the least busy days.

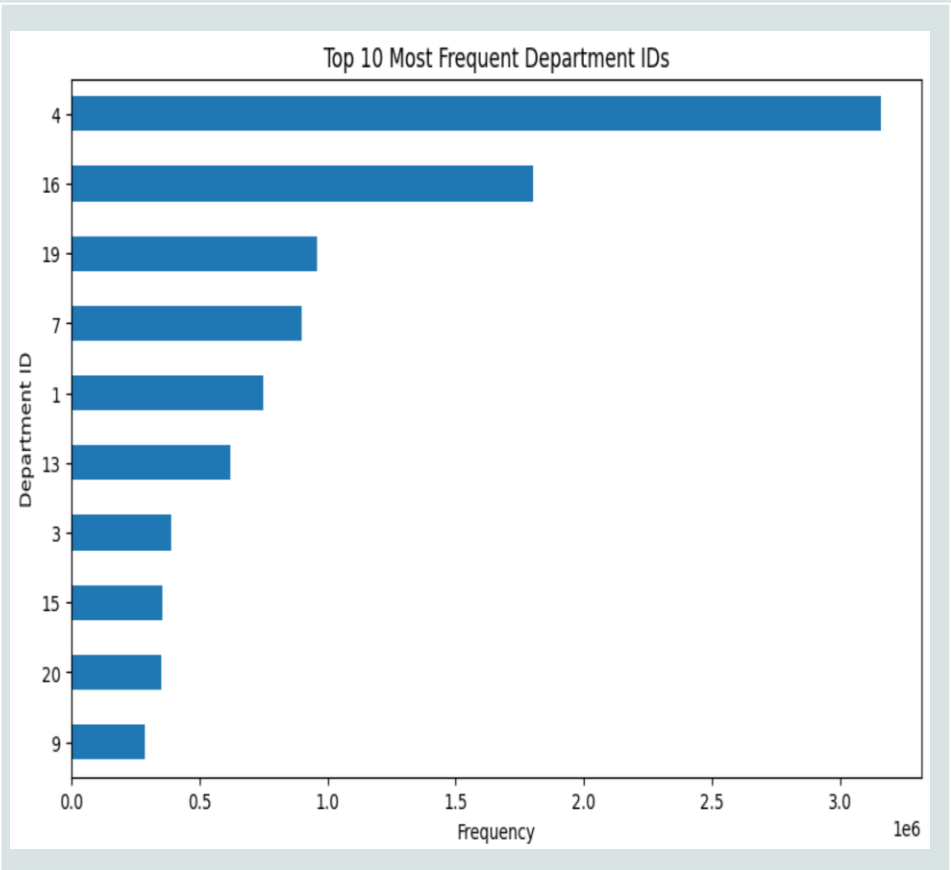
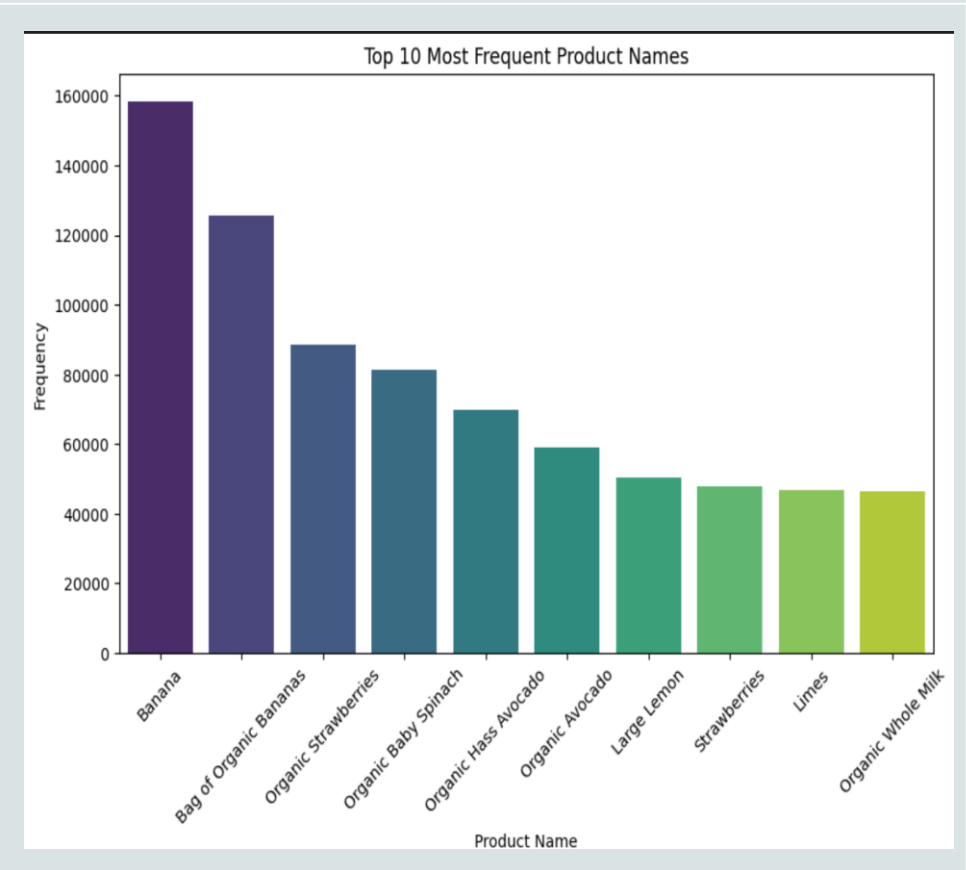
# Busiest Hours



The busiest hours, increase at 9 am until 3pm, when it starts to decrease.

# Top 10 Products and Departments

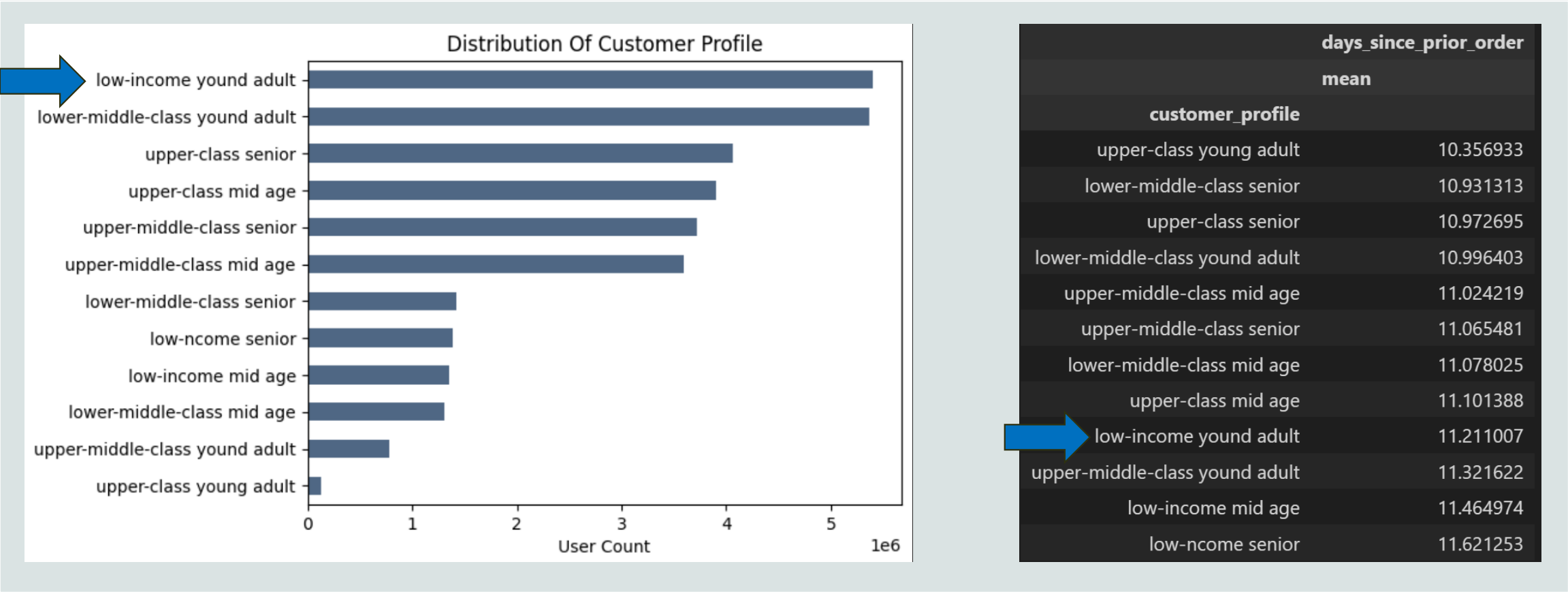
## Data Dictionary



Department_id	Department
9	Dry Goods Pasta
20	Deli
15	Canned Goods
3	Bakery
13	Pantry
1	Frozen
7	Beverages
19	Snacks
16	Dairy Eggs
4	Produce

Top 10 Departments consumed by all regions in the Instacart database. Produce is the highest, which could indicate a buying trend by its customers. Within Produce, Bananas are the top purchased Produce.

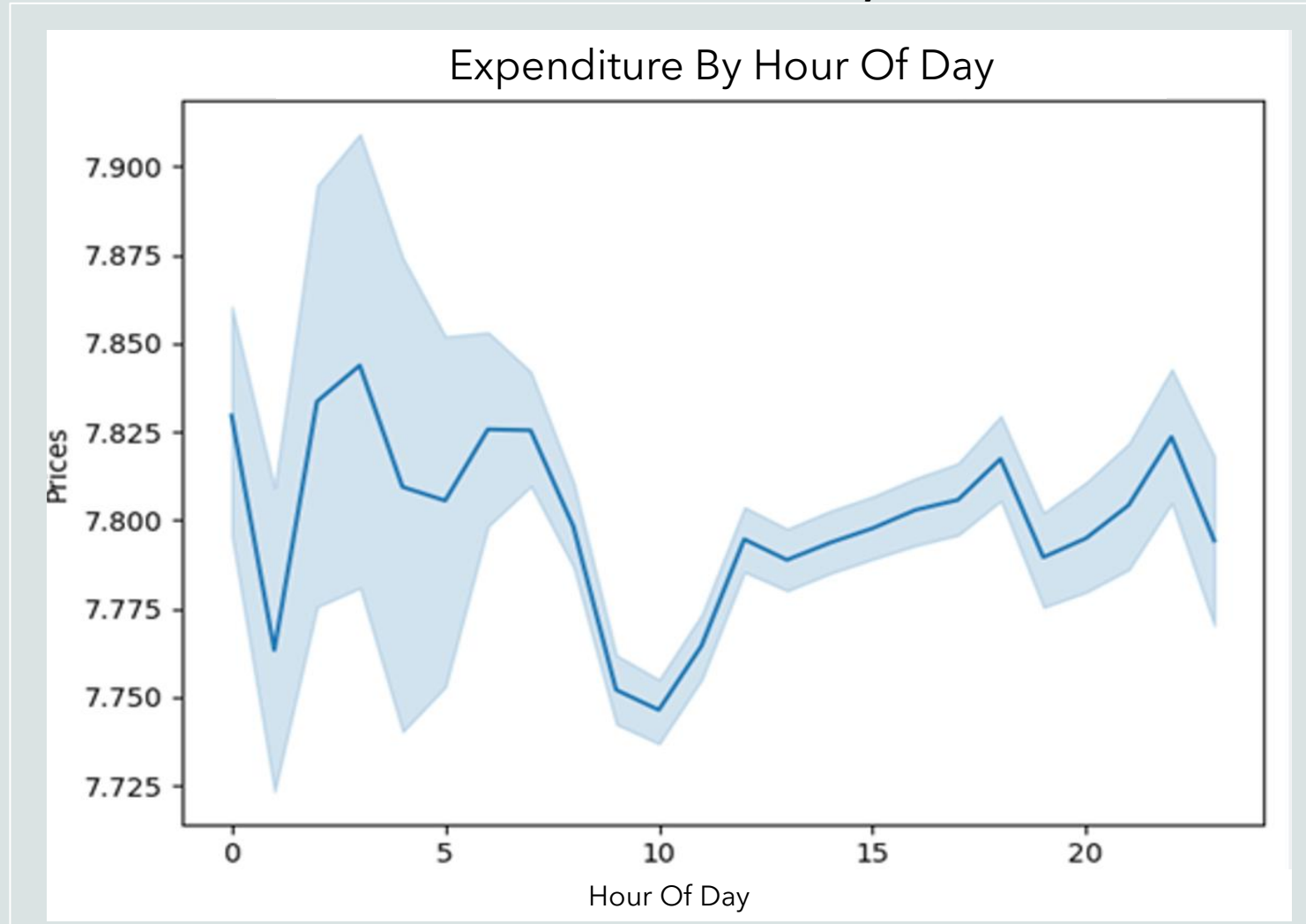
# Customer Profile



Low-income young adults come more often than other demographics, however, they do not return as often as others. This is an opportunity to provide incentives, so they come more often and spend more.



# Market Analysis



According to the graph above customers have a higher tendency to spend more between 4 am to 8 am, as well as from 8 pm until 10 pm. This can be an opportunity to sell more expensive products.

# Recommendations

- Runs all ads from Monday to Thursday when they are fewer sales to try and boost the sales on these days as well.
- Run the ads in morning for more expensive products
- Give more discounts on the most popular products types (snacks, pantry, and personal care)
- Give more discounts to loyal costumers, so they come back more often and buy more stuff.

# Pig E. Bank

Analytical support to the anti-money laundering compliance department to assess client and transactional risk at a global bank.



# Pig E. Bank

## Skills

- Intro to Big Data
- Data Ethics:
- Bias Security and Privacy
- Data Mining
- Predictive Analysis
- Time Series Analysis and Forecasting
- Decision Tree

## Data

- Data format - Excel
- Time Series analysis forecasting
- Intro to Data Mining
- Data Ethics: Bias, Security and Privacy
- Data Source: Customer Data Set- By CareerFoundry

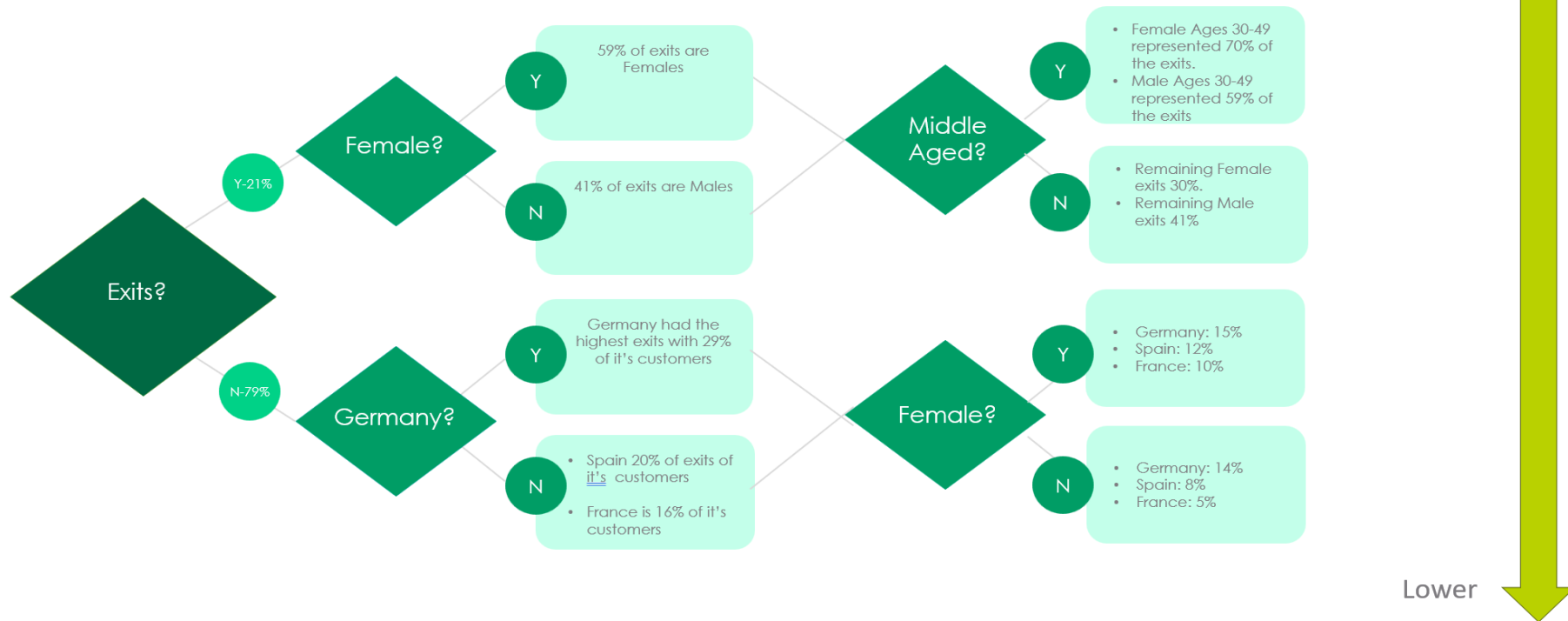
## Challenges

- Data cleaning, missing data, format issues and standardizing the dataset.
- Data does not provide date, so it's impossible to observe whether there was a trend of customer loss during specific period or something that occurred instantly

# Insights

- Few contributing factors on why clients are leaving the bank can be analyzed by:
- Age
- Gender
- Balance
- Tenure
- Credit Card

# Decision Tree



Decision tree based on gender, country & age.

- Females had a higher number of exits as compared to men.
- Within the female population, middle aged females were higher.
- Germany saw the most exits as compared to Spain and France

# Recommendations

- Pig E Bank should conduct surveys with their customers regularly, This will help to better understand customers banking needs.
- Provide incentives for females particular the one's who are up in age.
- Offer competitive rates for German customers.
- Since less active customers are more likely to leave, active customers should benefit in some way.

# Let's Connect!

Robert Indelicato

Data Analyst

