Portfolio

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DATA ANALYST

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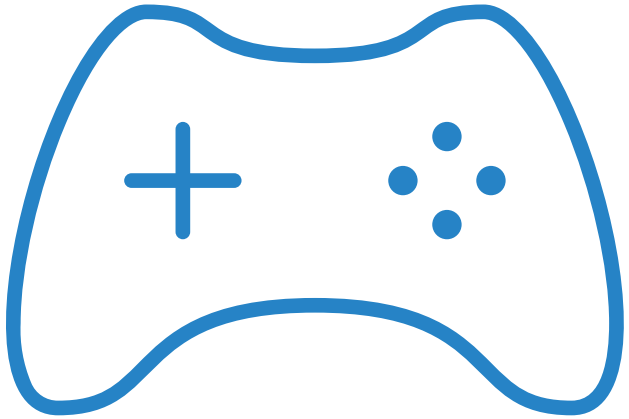
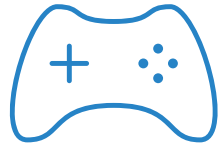
GameCo Sales



The Project



Company

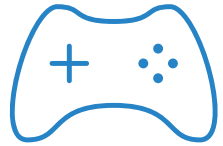
GameCo, a new video game company, wants to use data to inform development of new games.

Objectives

Conduct descriptive analysis of a video game data set to understanding of how GameCo's new games might fare in the market.

Dataset - Historical sales of video games

Analysis Process



Preparation

- Cleaning
- Grouping data

Descriptive Analysis

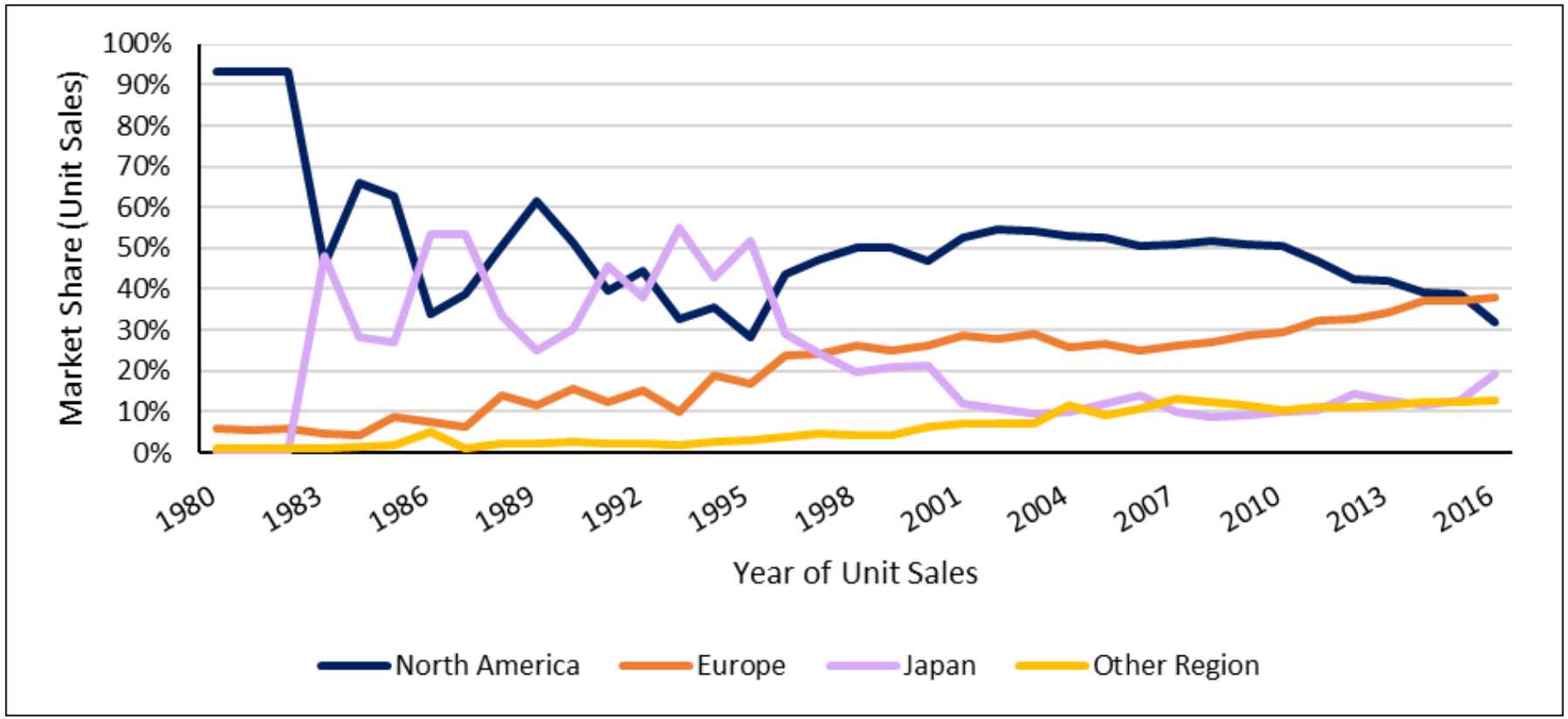
- Summarizing

Visualizations

Storytelling

Tools: **Excel** Pivot Tables, **PowerPoint**

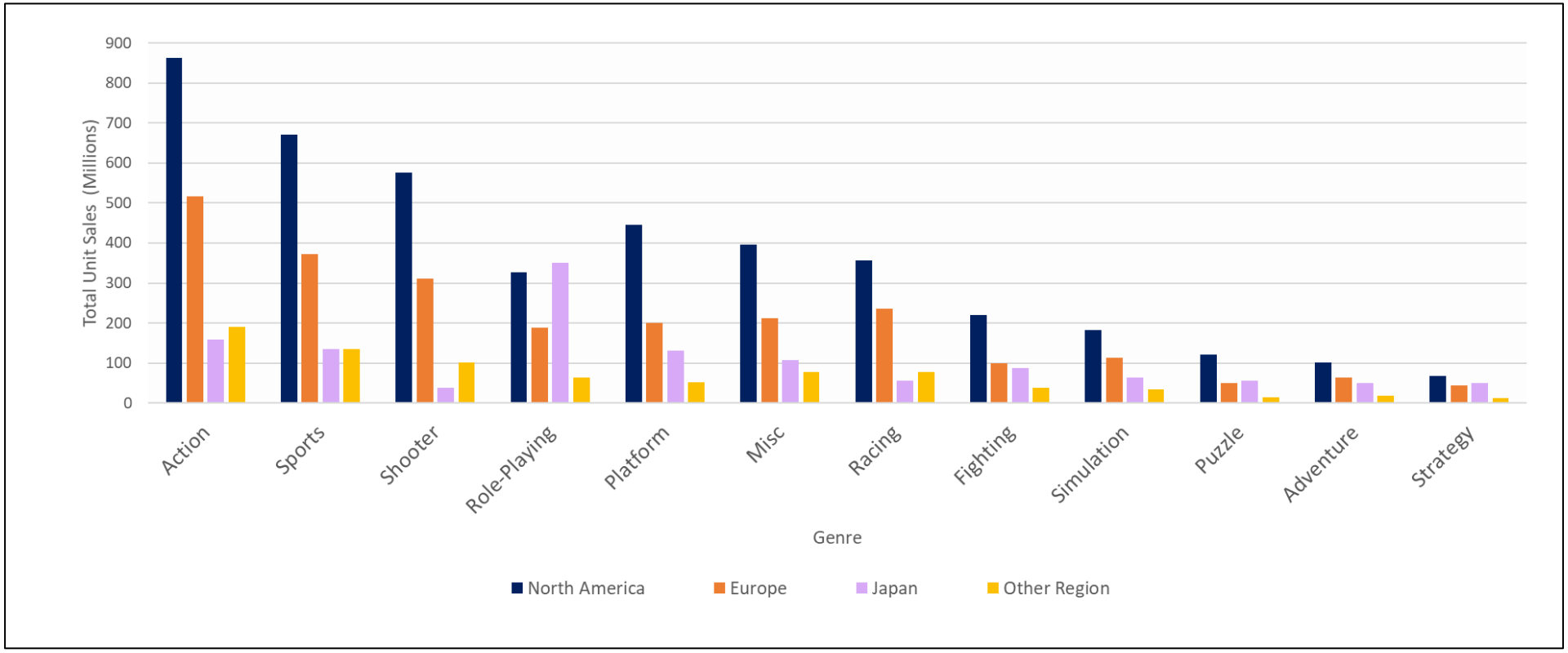
Findings



This line chart shows that in recent years, Europe as been steadily gaining market share, contrary to North America.

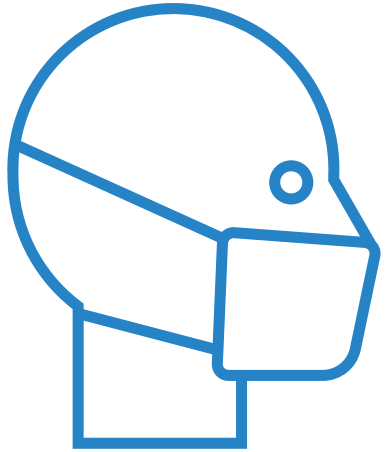
Resources: Presentation and Project Reflection

Findings

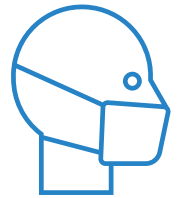


North America is the leader in total unit sales in every category except role-playing games.

Influenza Season



The Project



Company

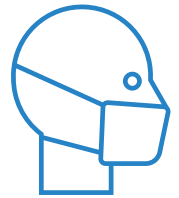
A medical staffing agency that provides temporary workers to hospitals on an as-needed basis. The agency is currently planning for influenza season, a time when additional staff are in high demand.

Objectives

Examine trends in influenza and how they can be used to proactively plan for staffing needs across the country.

Dataset - Census data, deaths data from the CDC

Analysis Process



Data Preparation
- Integrity checks
- Transformation and Integration

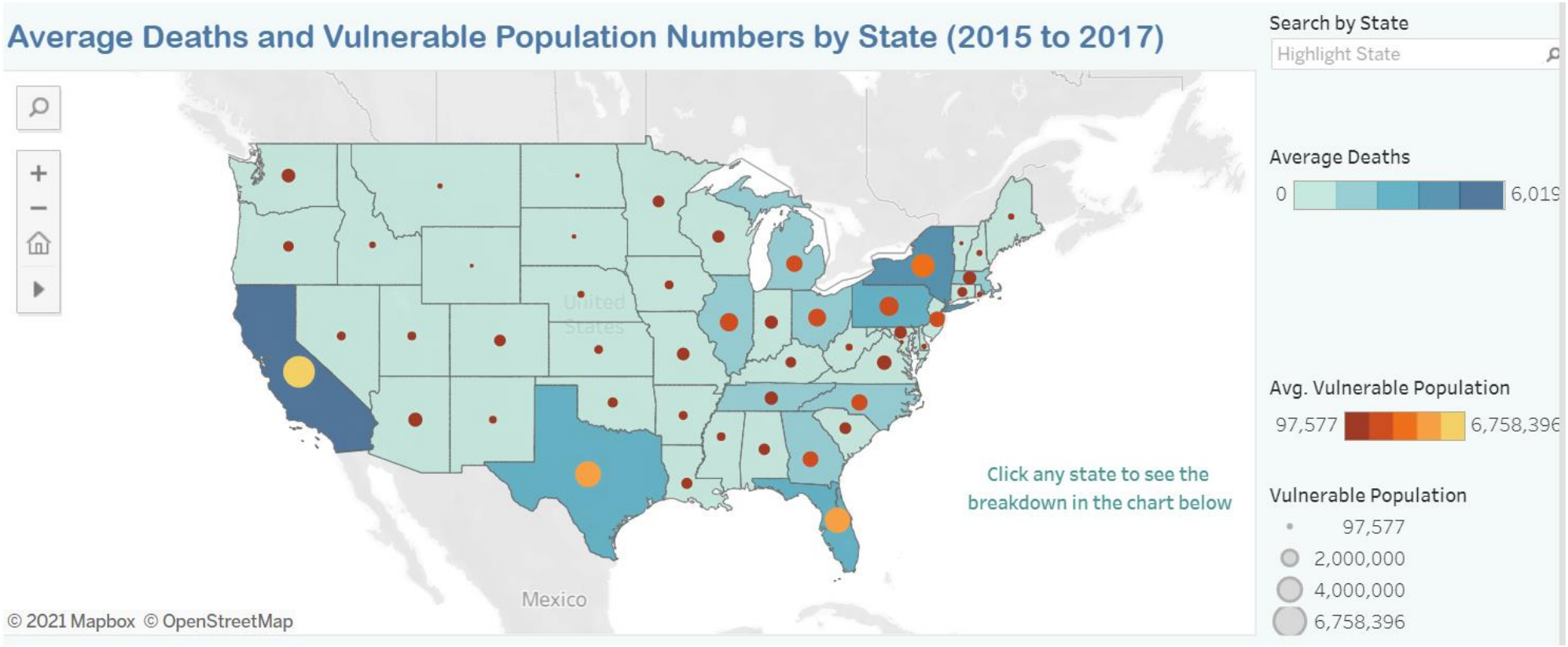
Descriptive Analysis

Statistical Hypothesis testing

Visual Analysis and Storytelling

Tools: **Excel** for Pivot Tables and Data Integration, **Tableau** Story Board

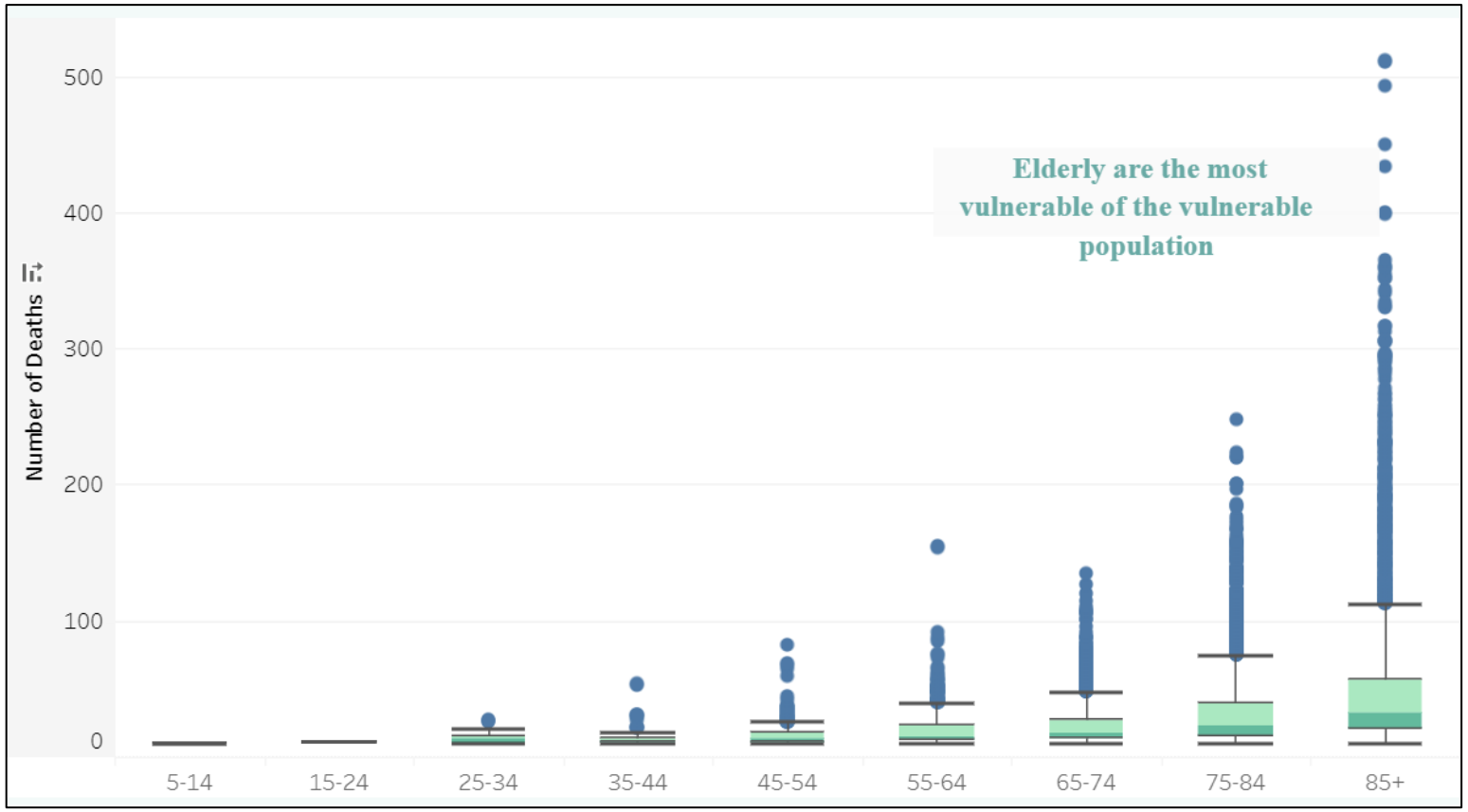
Findings



The map shows that California, Texas and Florida have a higher number of vulnerable populations and will require additional staffing.

Resources: Video Presentation, Tableau Data Story, Data Limitations

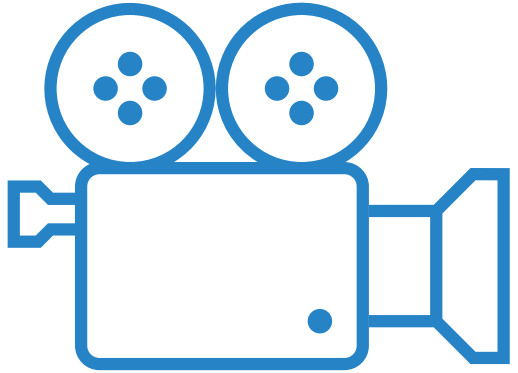
Findings



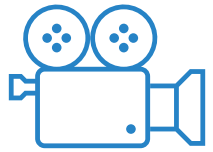
Elderly people occupy a considerable number in the influenza related deaths among vulnerable populations

Resources: Video Presentation, Tableau Data Story, Data Limitations

Rockbuster Films



The Project



Company

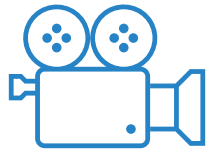
Rockbuster Stealth LLC is a movie rental company that used to have stores around the world. To remain competitive, Rockbuster management plans to launch an online video rental service.

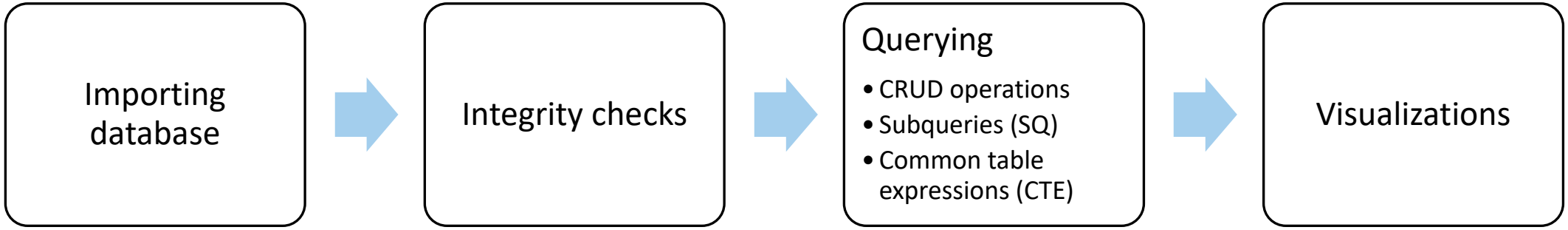
Objectives

Answer business questions posed by Rockbuster's Management Board to inform their strategical plans.

Dataset - Data from all Rockbuster's stores worldwide.

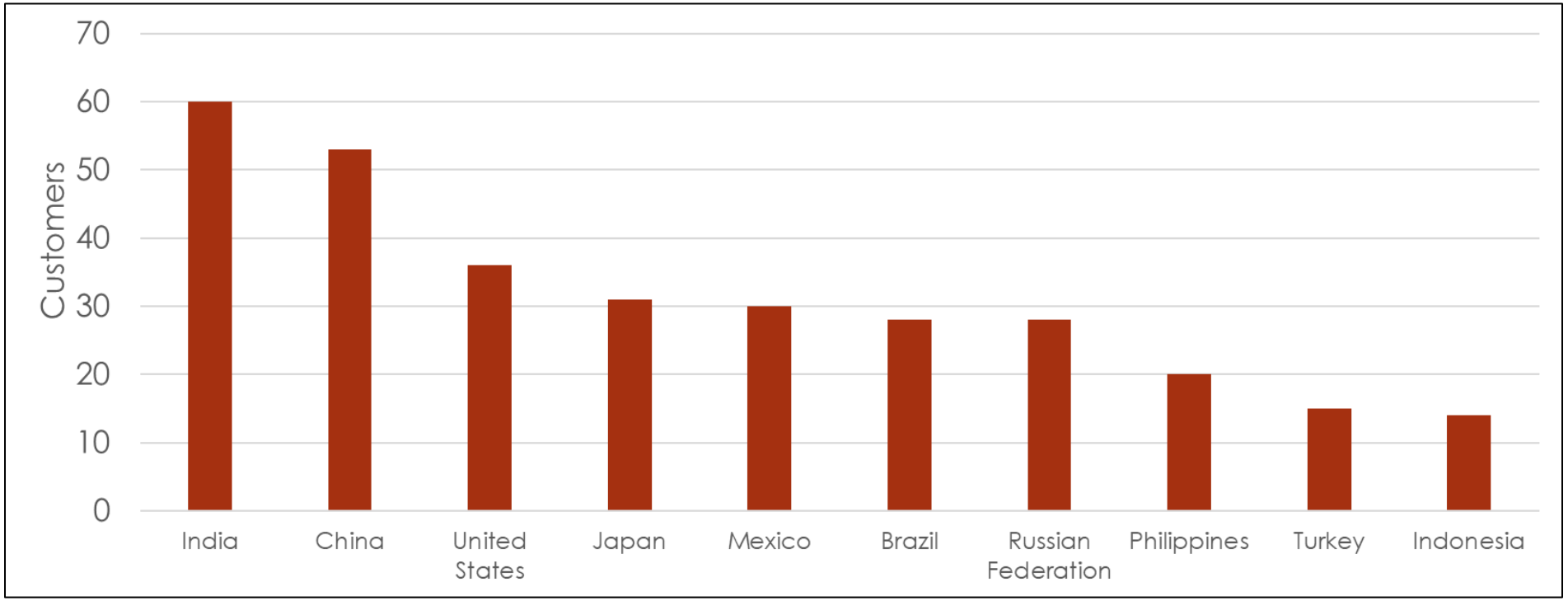
Analysis Process





Tools: **PostgreSQL** for Integrity Checks, SQ and CTE, **Tableau** for Map Visualization

Findings



The bar graph above shows the 10 ten countries based on number of customers.

GitHub Resources: Queries, Data Dictionary, Presentation

Findings

The chart shows the top 5 customers within the top ten countries based on their total payments.
These top customers are eligible for rewards for their support.

GitHub Resources: Queries, Data Dictionary, Presentation

Instacart Customer Behaviour

The Project

Company

Instacart, an online grocery store that operates through an app. Despite good sales, executives want to uncover more information about their sales patterns.

Objectives

Perform an initial data and exploratory analysis of customer data to derive insights and suggest strategies for better customer segmentation.

Dataset - Instacart datasets about customers, orders, products and departments

Analysis Process

Data Preparation

- Data Wrangling
- Integrity Checks
- Merge Datasets

Exploratory Data Analysis

- Variable Derivation
- Create flags based on Customer profiles
- Aggregations

Visualizations

- Reporting in Excel
- Population Flows

Tools: **Python** for Data Analysis and Visualization, **Excel** for Reporting

Findings

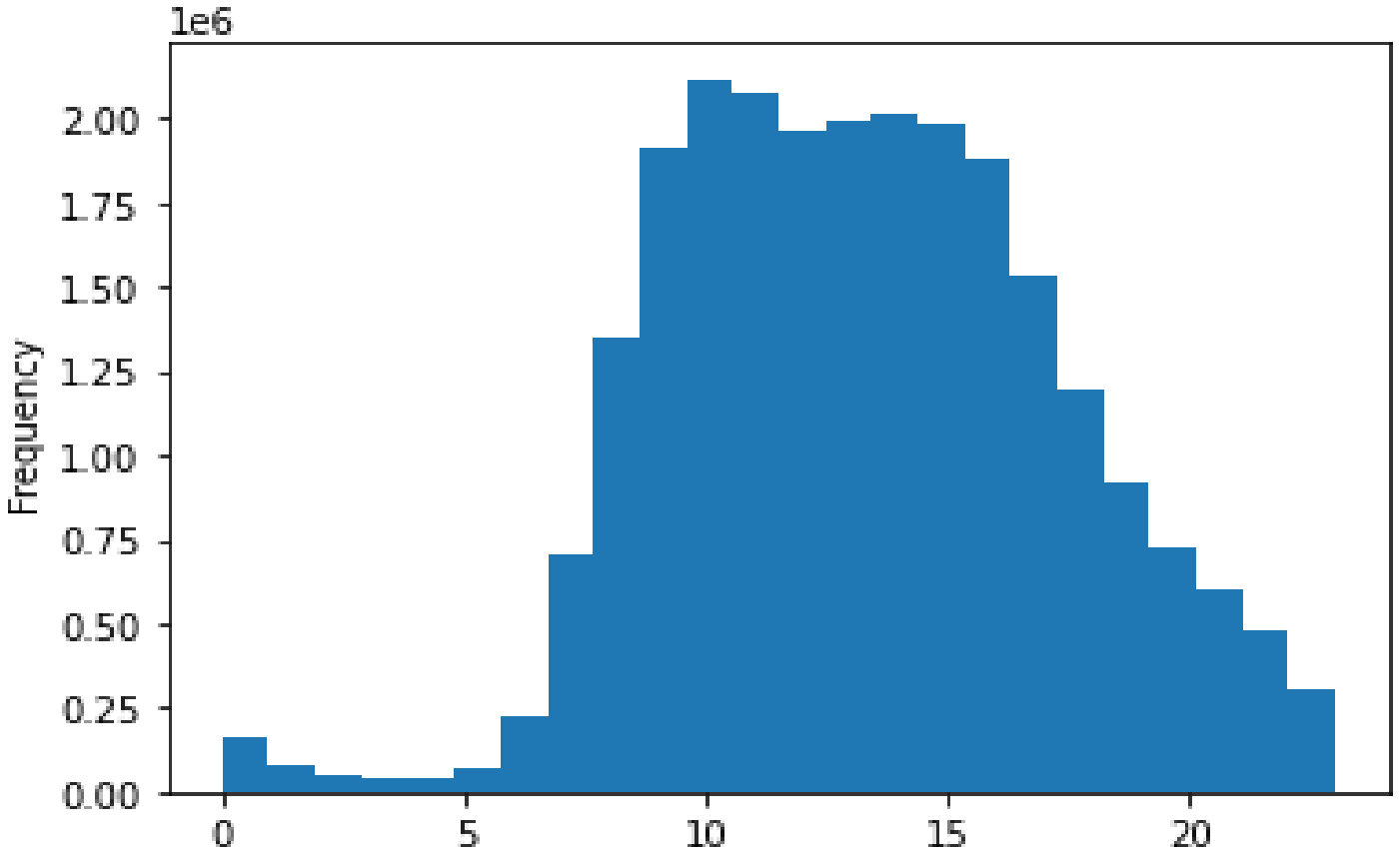
Customer Profiles

Parental Group

Income Level

Loyalty Status

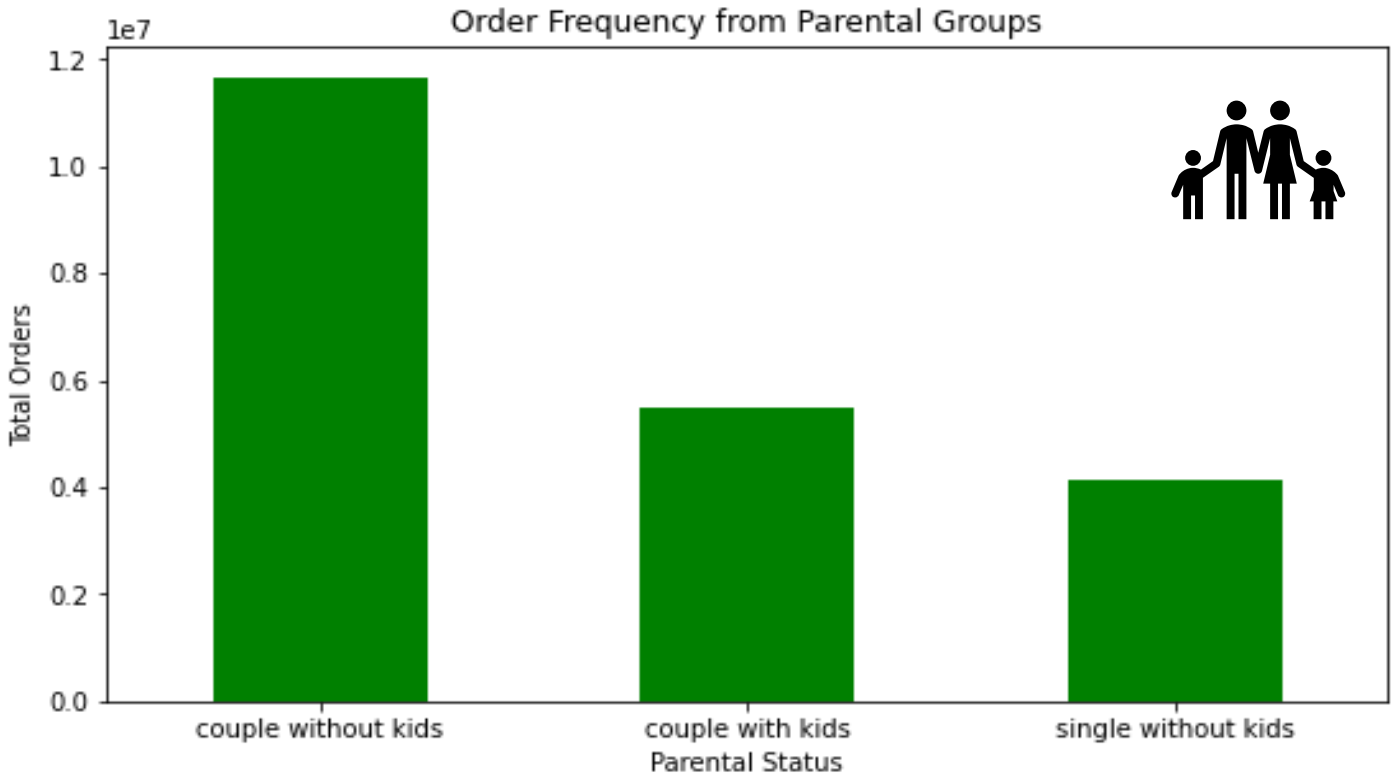
Time of the Day



The histogram above shows that the busiest times are between 10am and 3pm during the day.

GitHub Resources: Pythons Scripts, Excel Report

Findings



The graph is based one of the customer profiles based on parental groups. Couples without children made the most orders on the Instacart platform.

GitHub Resources: Pythons Scripts, Excel Report

Patient Discharge Encounters

COUNTIES IN CALIFORNIA, U.S.A

The Project

Company

CaLED, a fictitious company, specializes in developing user experience (UX) related solutions for healthcare facilities and patients. A UX research manager wants to investigate patient encounters in California.

Objectives

Preliminary investigation of discharge encounters related to patient race groups and ED discharge types.

Dataset – Facility-level and location level data form the Office of Statewide Health Planning & Development (OSPHD)

Analysis Process

Data Preparation
- Data Sourcing
- Data Wrangling
- Integrity Checks
- Merge Datasets

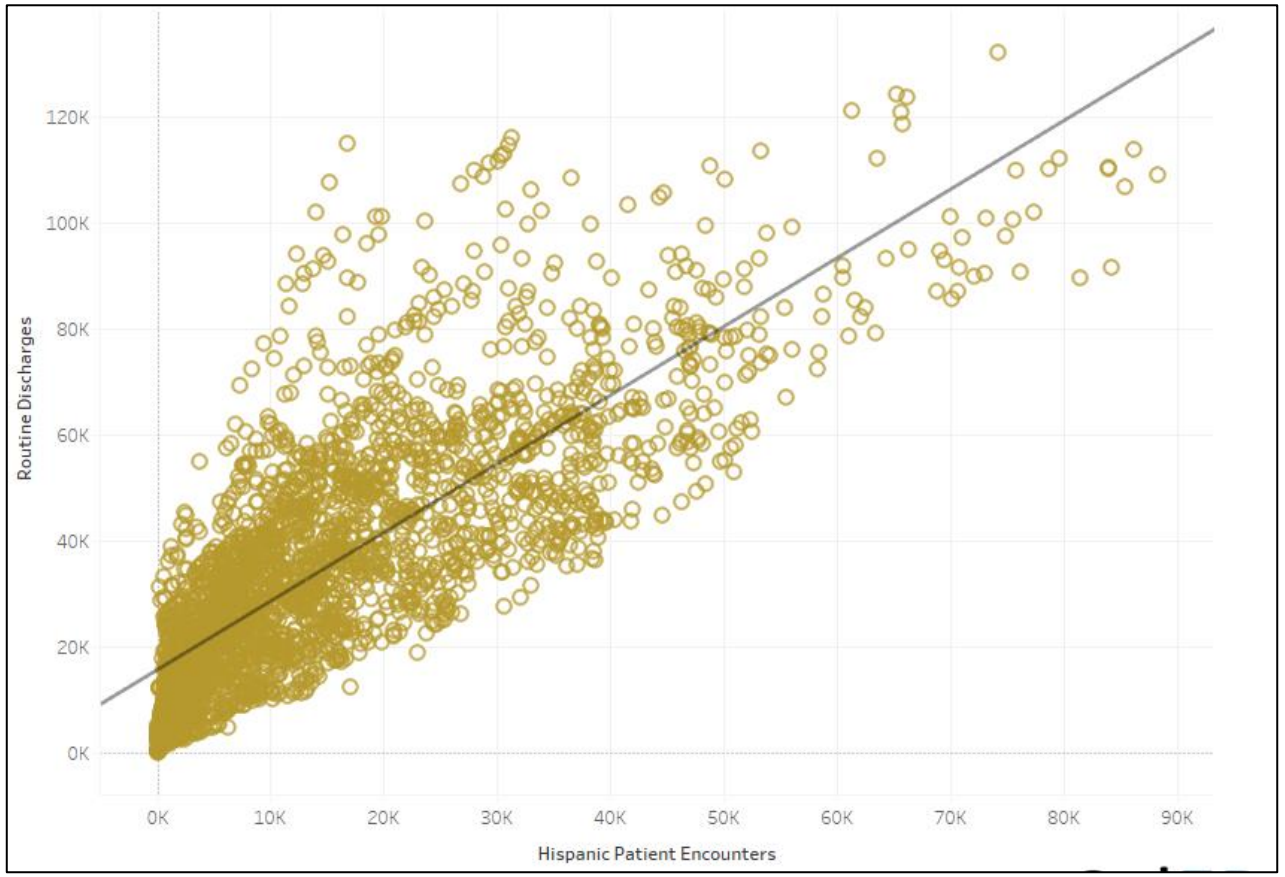
Exploratory Data Analysis
- Variable Derivation
- Aggregations
- Spatial Analysis

Analysis
- Regression
- Clustering
- Time-series

Visualizations
- Reporting in Tableau

Tools: **Python** for Preparation to Analytics, **Tableau** for Dashboard Reporting

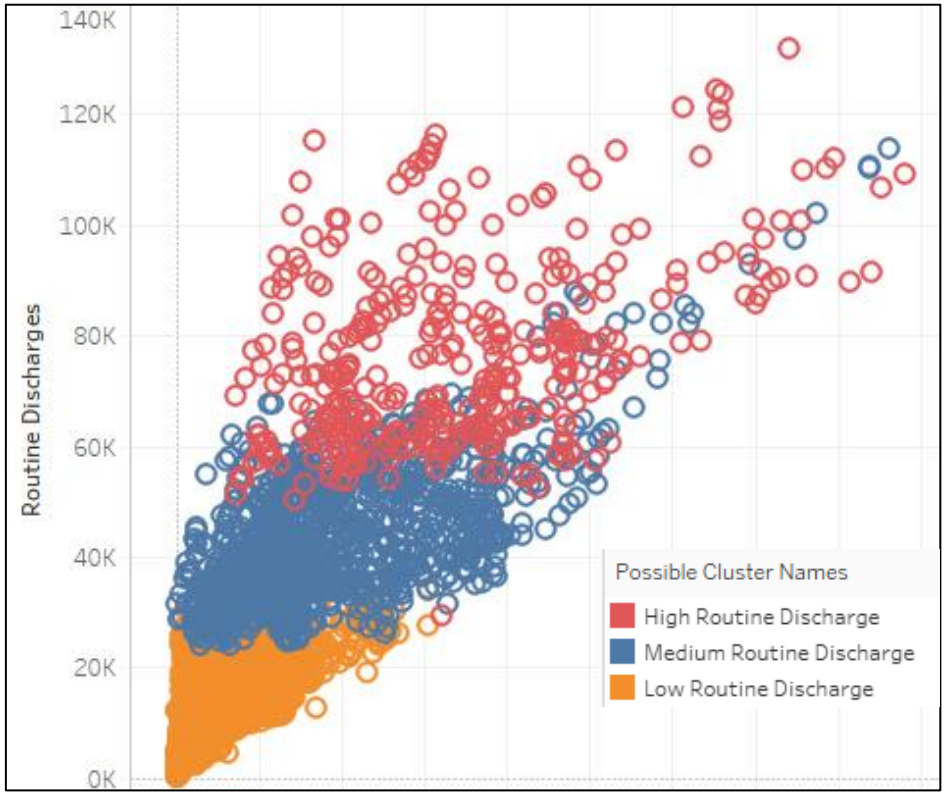
Findings



Hispanic patient encounters explain 63% of the variability in the data for routine discharges.

GitHub Resources: Pythons Scripts, Tableau Storyboard, Reflections

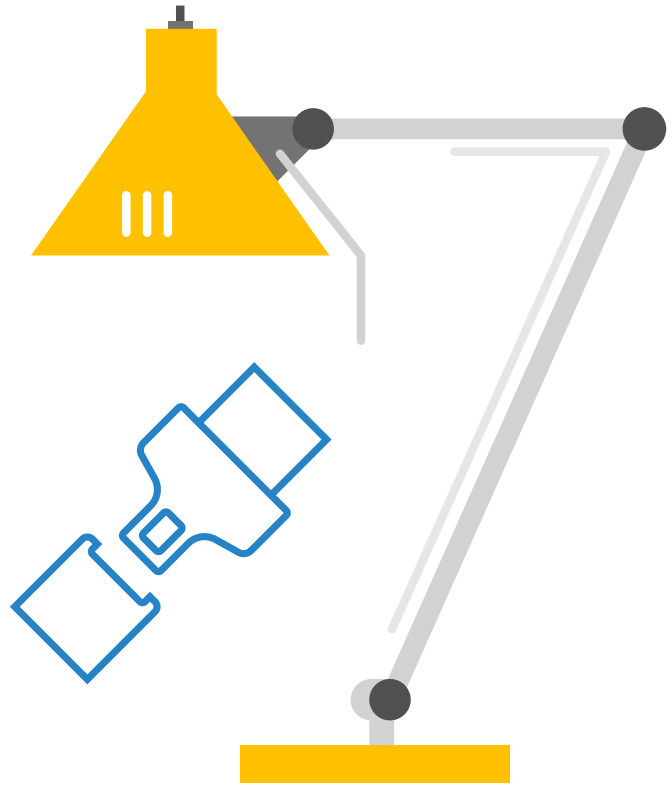
Findings



Facility Patient Discharge Profiles: three clusters based on Hispanic patient encounters were derived.

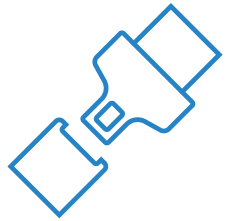
GitHub Resources: Pythons Scripts, Tableau Storyboard, Reflections

UK Road Safety



IDENTIFY CHARACTERISTICS OF MAJOR INCIDENTS

Overview



Background

The safety team within the department of transport are looking into way of reducing the number of major incidents. The safety team classes major incidents as fatal accidents involving 3+ casualties.

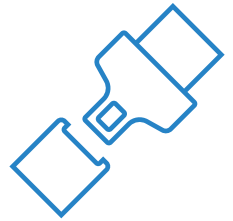
They are trying to learn more about the characteristics of these major incidents so they can brainstorm interventions that could lower the number of deaths.

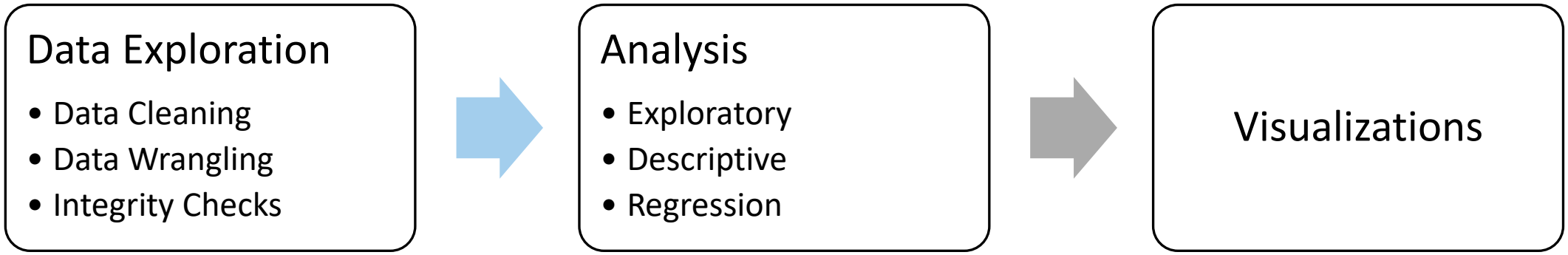
Objective

To identify characteristics of major incidents that can assist the safety team in brainstorming interventions.

Dataset – Road Accident Safety Data from the UK department of Transport

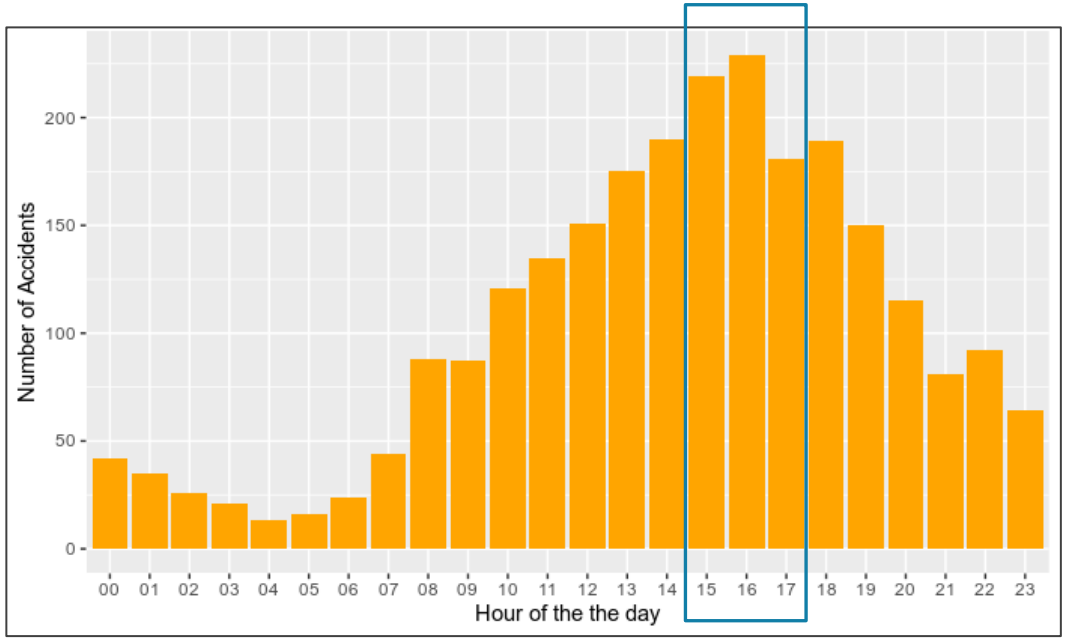
Analysis Process



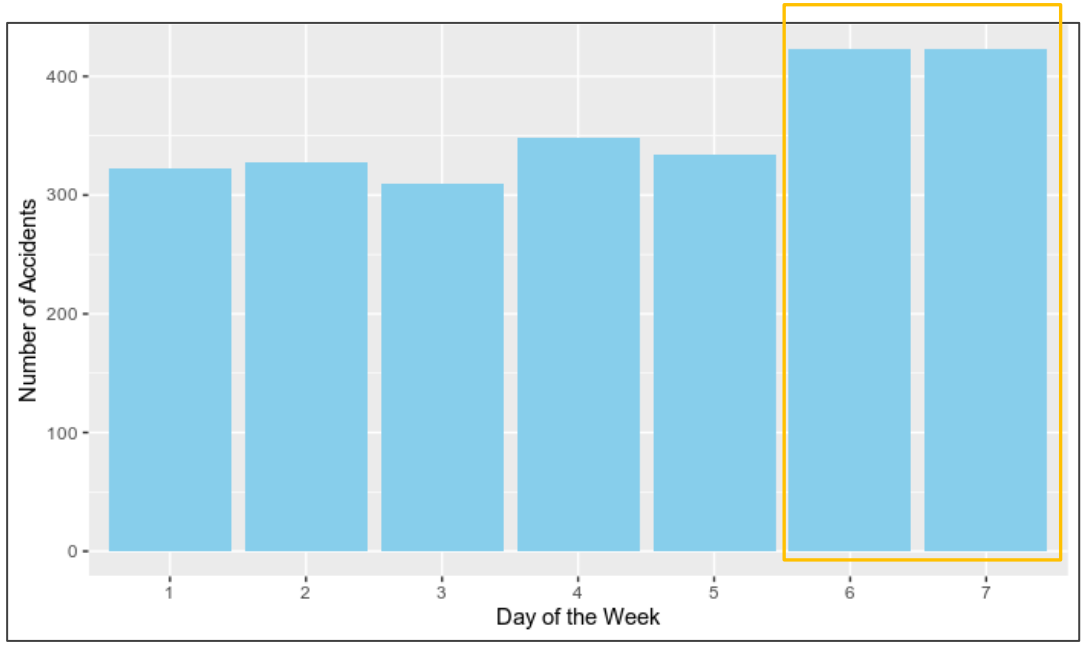


Tools: **R** markdown for Preparation, Analysis and Reporting

Findings



Major accidents peaked during the afternoon time around 3pm (15).

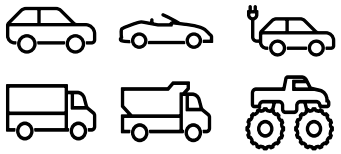


Saturdays and Sundays have slightly higher numbers of accidents compared to weekdays.

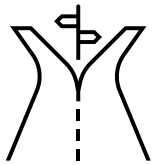
Resources: Analysis, Visualizations and Reporting

Findings

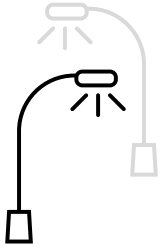
Based on statistical analysis, the following characteristics that are **significantly related to an increase in major accidents'**



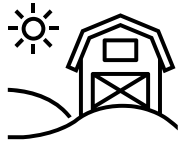
Number of Vehicles



Road Type

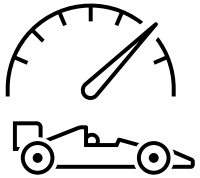


Light Conditions

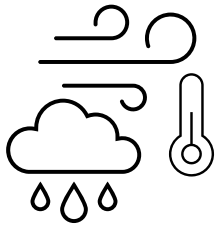


Rural Areas

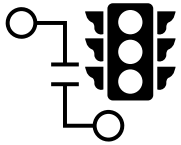
Time of Day



Speed Limit



Weather Conditions



Special Conditions