

Abstract geometric lines in black on a white background, forming various overlapping polygons and shapes.

DATA ANALYSIS PORTFOLIO CASE STUDIES

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PROJECTS

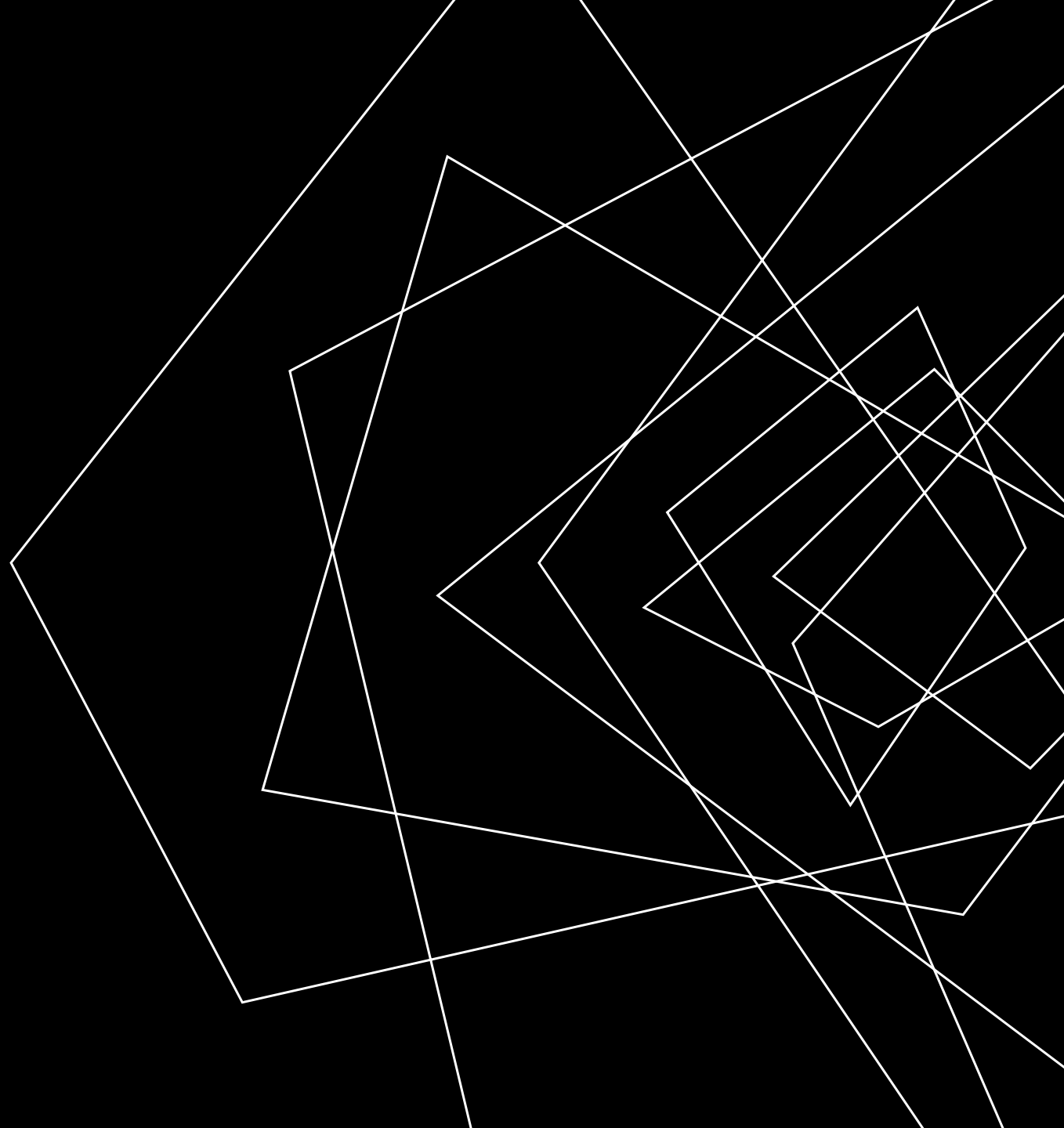
GameCo. – Video Game Sales

Influenza – Resource Allocation

Rockbuster – Rental Analysis

Instacart – Grocery Analysis

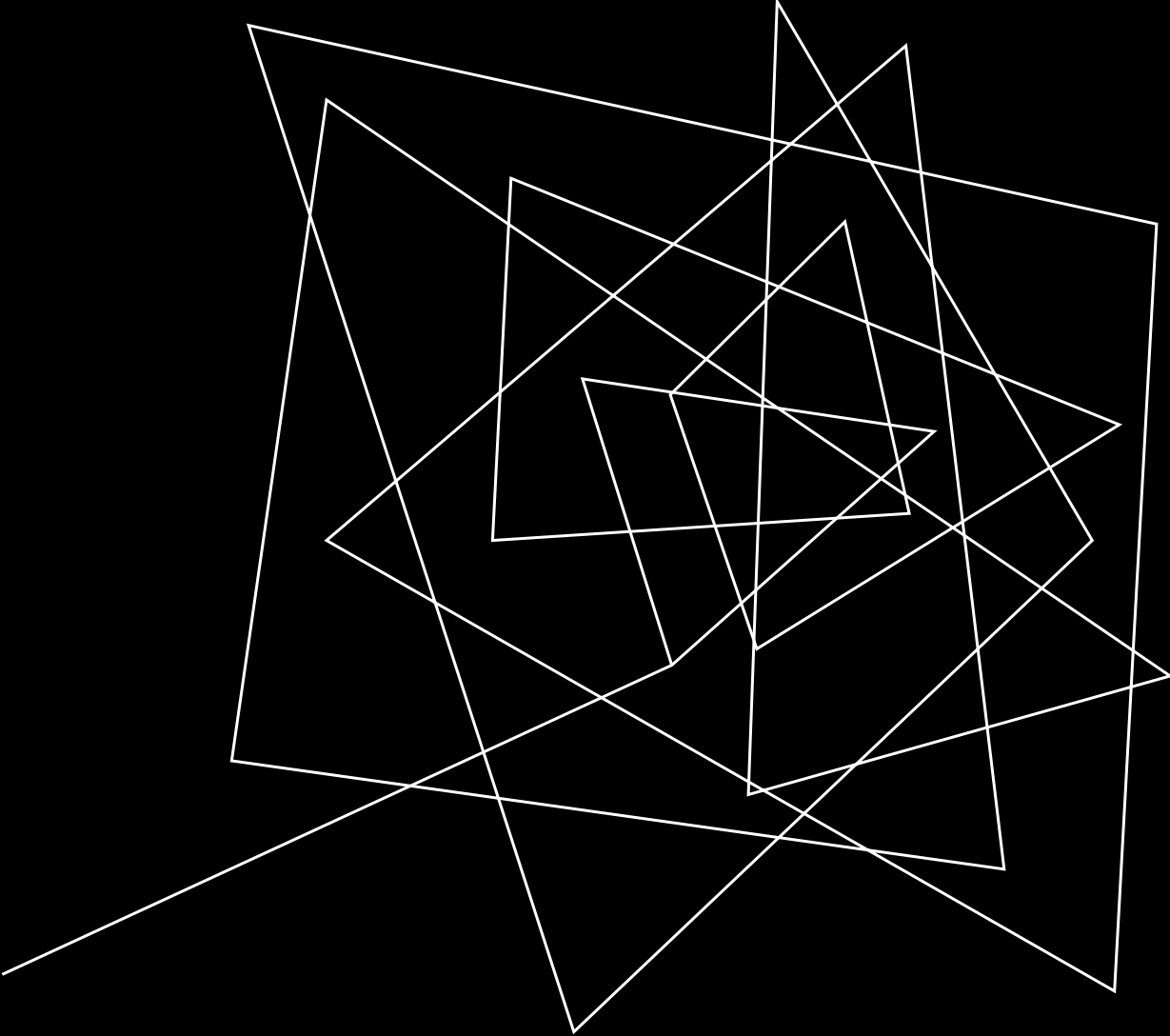
Open Exploratory Project



GAMECO. – VIDEO GAME SALES

GameCo. is a fictional video game distributor that wants to use its historical data to gain insights on how market more effectively in the future.

GAMECO. – VIDEO GAME SALES



SKILLS / PROCEDURES

- Grouping Data
- Visualizing Results
- Summarizing Data
- Presenting Results
- Descriptive Analysis

TOOLS USED

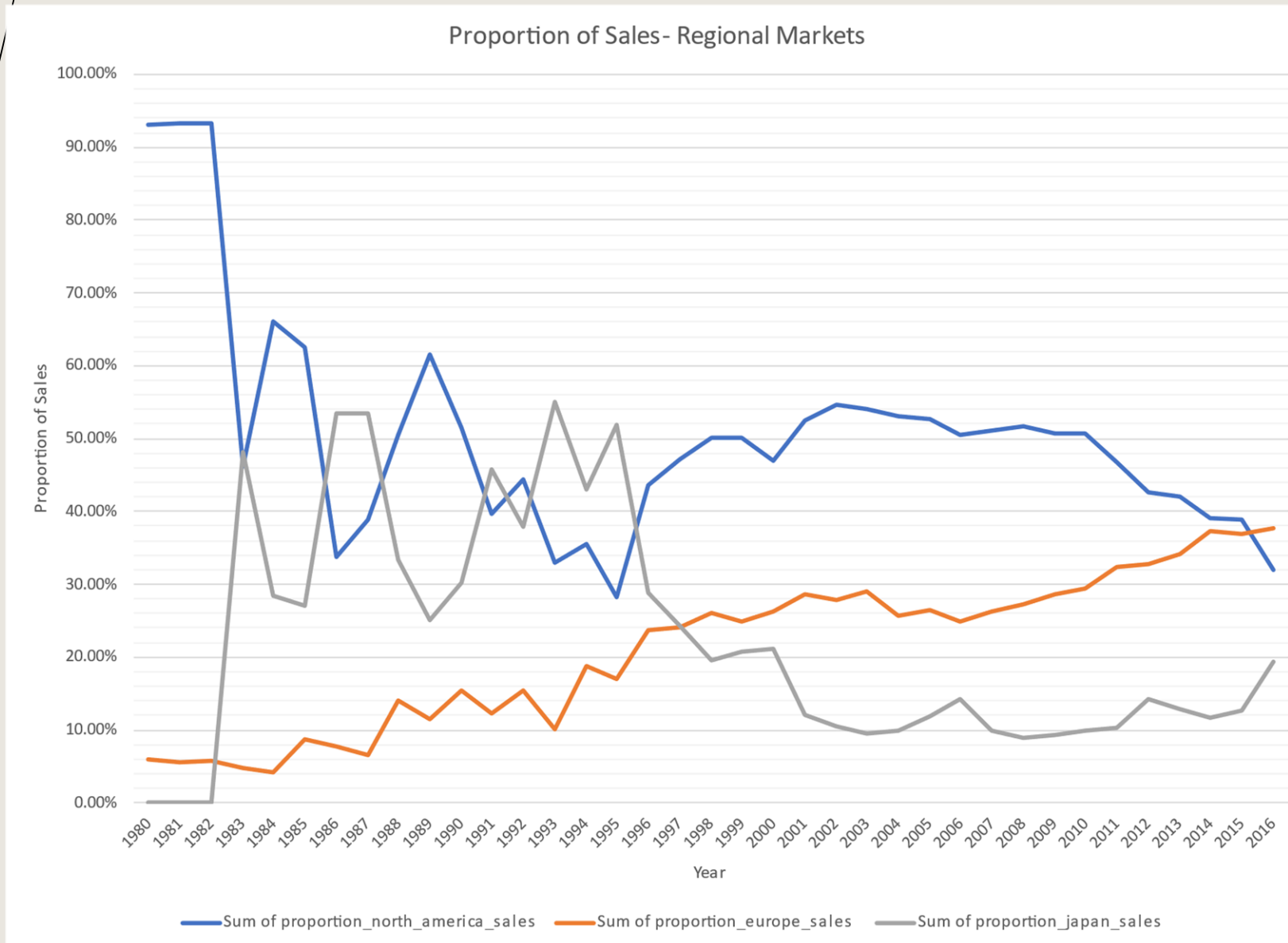
- Excel
- Powerpoint



GAMECO. RESULTS

- Dataset provided by GameCo, including Name, Platform, Year, Genre, Publisher, and Sales among various regions.
- Excel was used to clean, aggregate, and analyze data.
- Excel was used to generate charts and present findings.
- Visualization on following slide.

GAMECO. RESULTS – CONT.

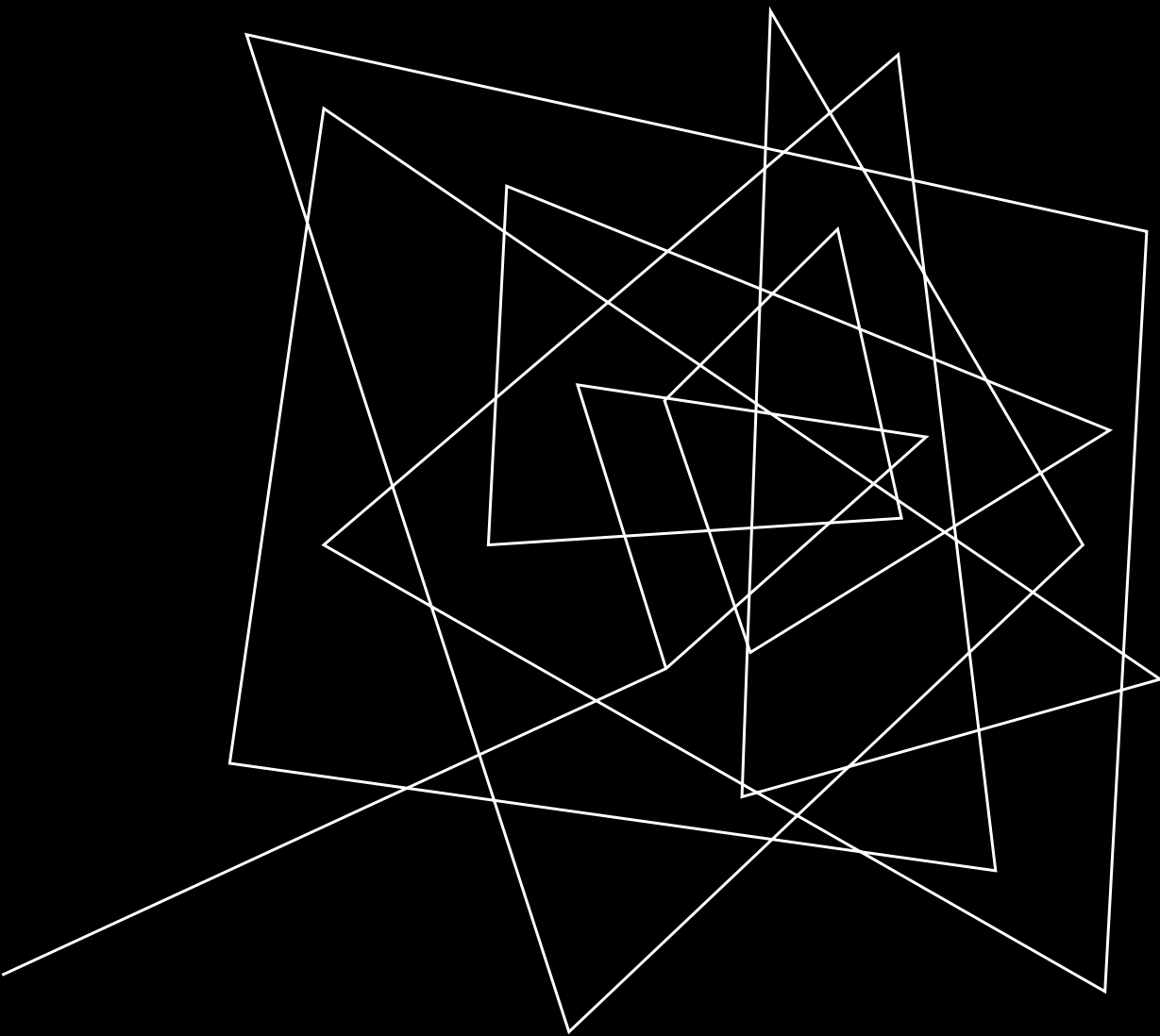


INFLUENZA – RESOURCE ALLOCATION

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 where to send staff to help manage the influenza season.

INFLUENZA – RESOURCE ALLOCATION



SKILLS / PROCEDURES

- Data Cleaning
- Data Integration / Transformation
- Statistical Hypothesis Testing
- Visual Analysis
- Storytelling

TOOLS USED

- Excel
- Tableau

INFLUENZA - RESULTS

- Datasets provided by CDC and U.S. Census Bureau – Flu Related Deaths and Population
- Excel was used to clean, transform, integrate and analyze Data
- Tableau was used to visualize results and create storyboard surrounding data.
- Link to storyboard:
<https://public.tableau.com/app/profile/eric.riesberg/viz/Achievement2/Story1>
- Link to video, talking through storyboard: <https://youtu.be/yQYo00kxXSY>
- Example visual on next slide.

INFLUENZA – RESULTS – CONT.

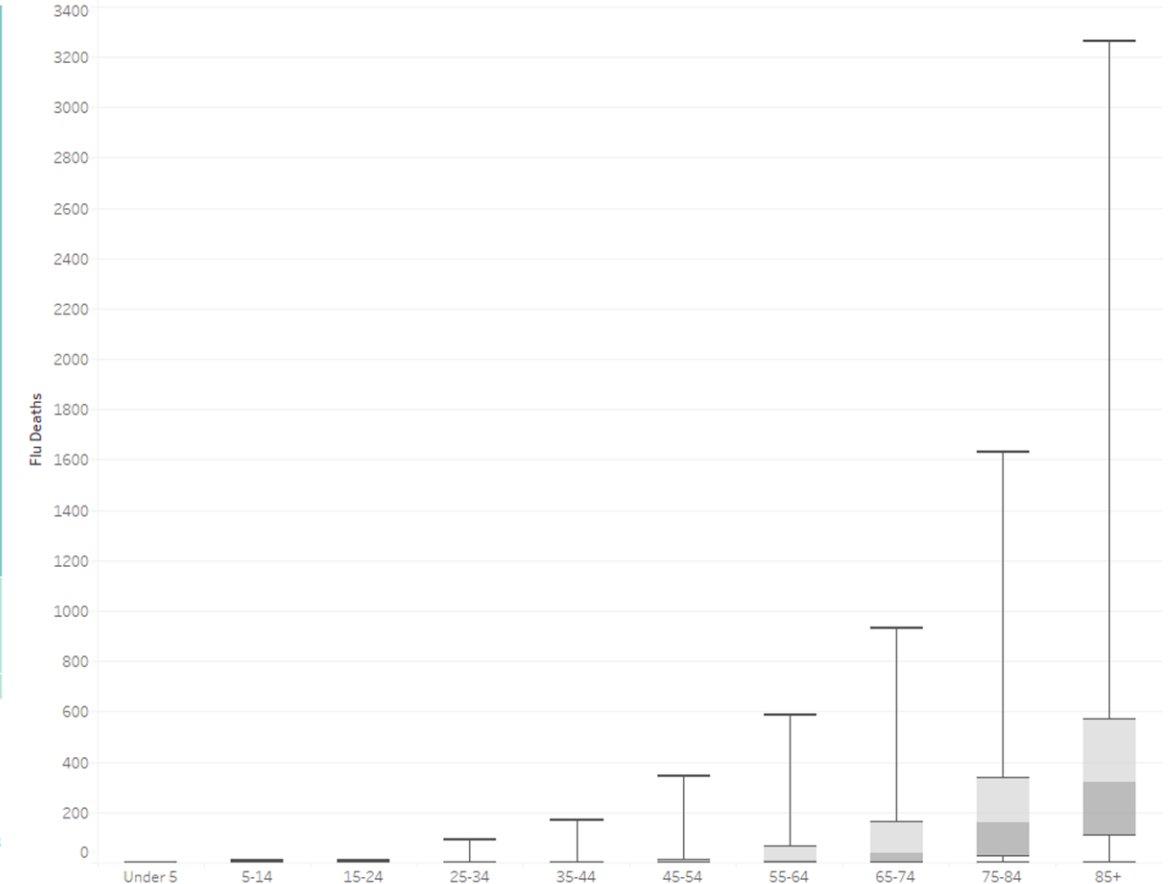
Flu Deaths vs Age

Age is an important factor driving vulnerability. As populations get older, they become susceptible to death by the flu at a higher rate than younger populations. This can be seen by the two charts below.

Flu Deaths by Age Group (Average per year)



Flu Deaths By Age

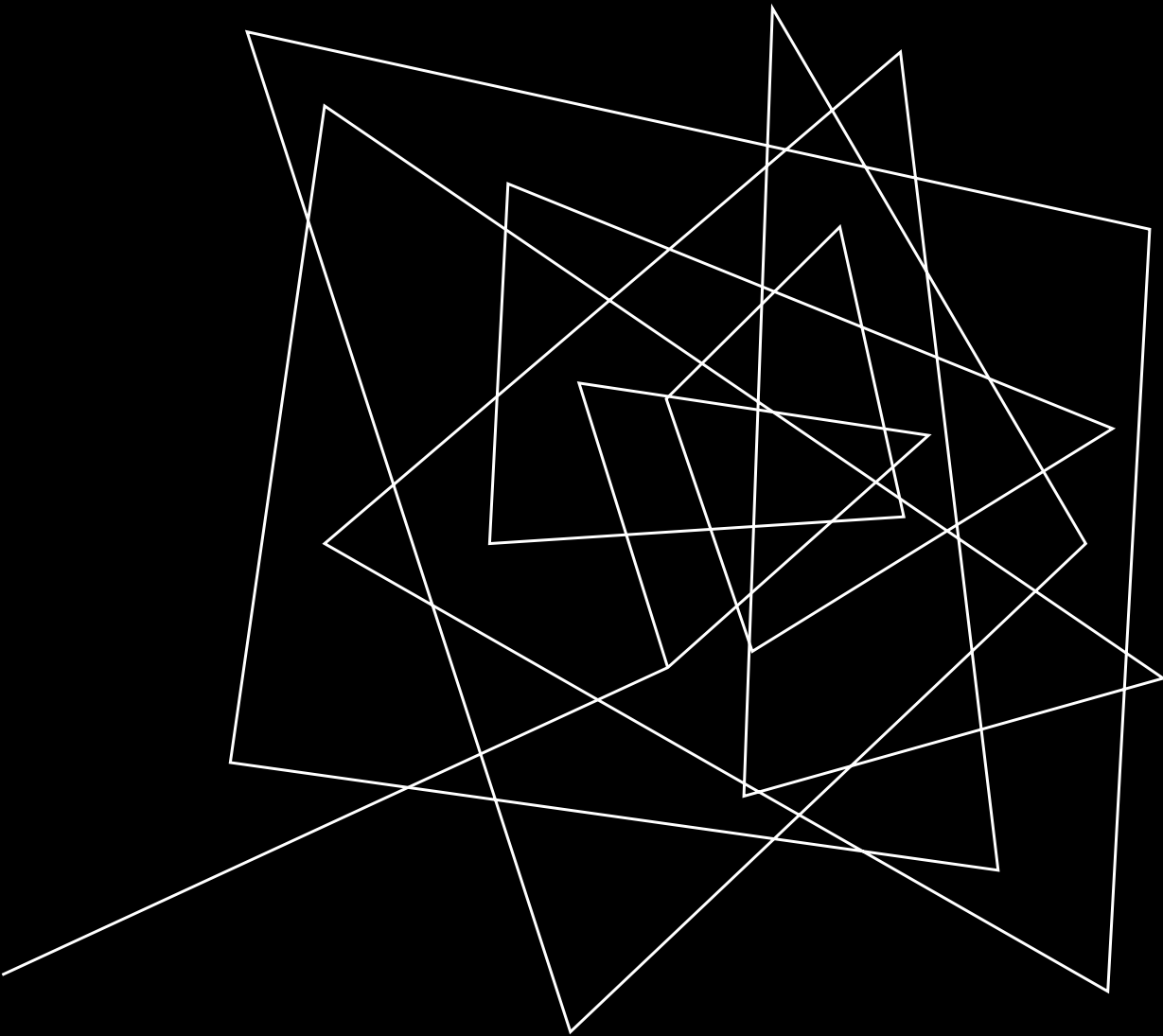


ROCKBUSTER – RENTAL ANALYSIS

Rockbuster is a movie rental company that is looking to understand it's current rental trends, and to answer the following questions:

- Which movies contributed the most/least to revenue gain?
- What was the average rental duration for all videos?
- Which countries are Rockbuster customers based in?
- Where are customers with a high lifetime value based?
- Do sales figures vary between geographic regions?

ROCKBUSTER – RENTAL ANALYSIS



SKILLS / PROCEDURES

- SQL
- Querying Relational Database
- Filtering
- Subqueries
- CTEs

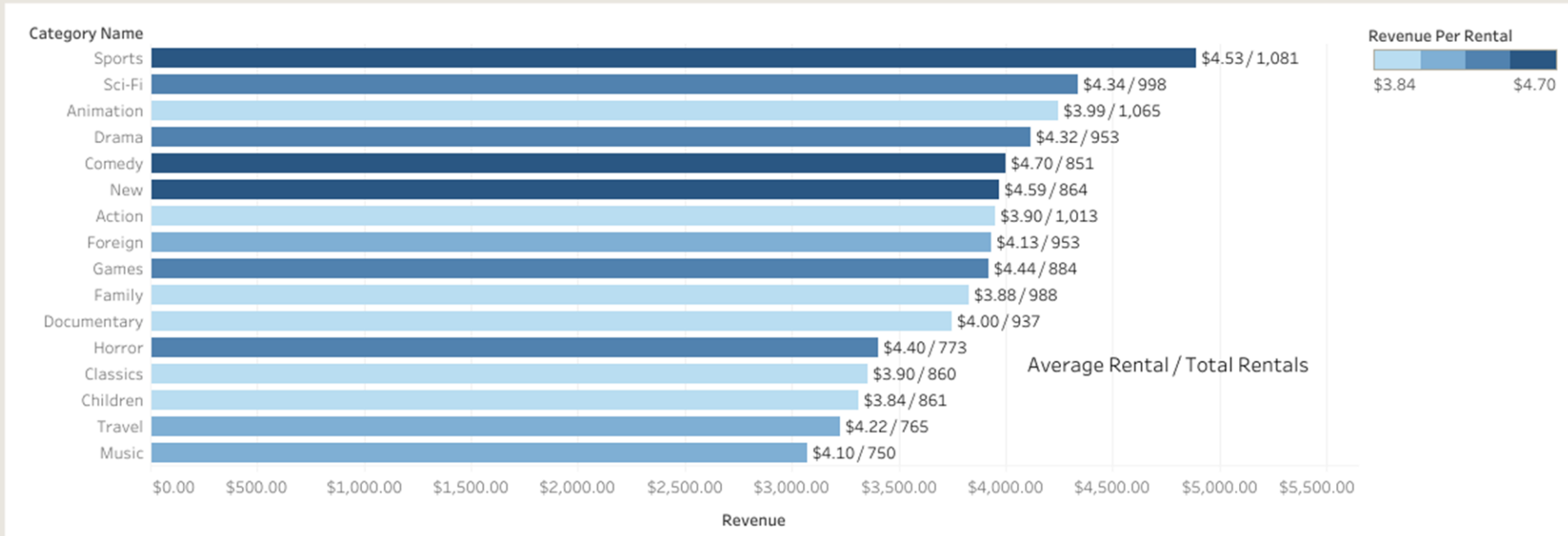
TOOLS USED

- PostgreSQL
- DBVisualizer
- Tableau

ROCKBUSTER - RESULTS

- Dataset provided by Rockbuster. Data dictionary included in GitHub to show relations between data.
- SQL queries used to parse and analyze data. DBVisualizer used to see relational database.
- Tableau used for visualizations.
- Link to GitHub Repository:

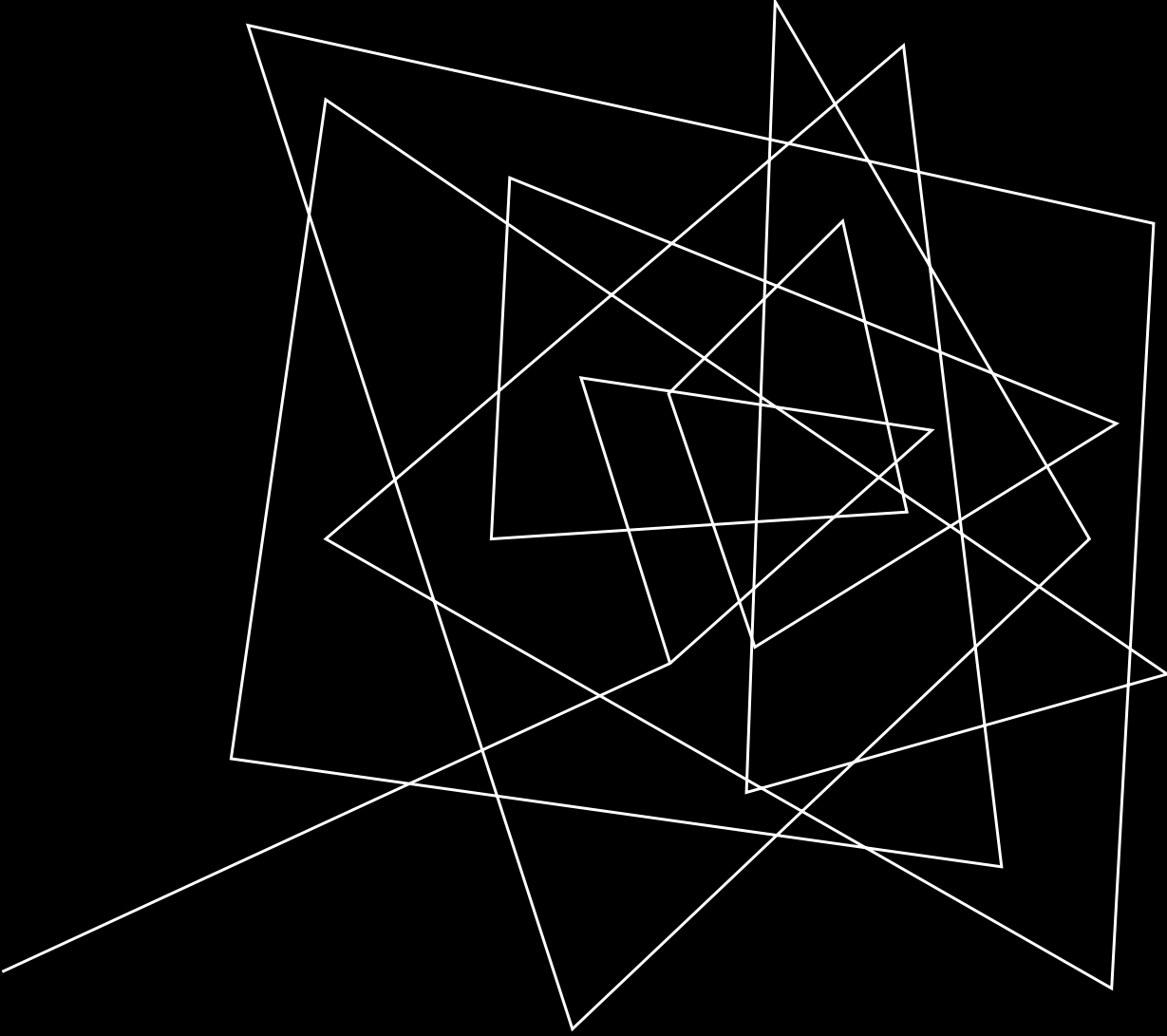
https://github.com/eriesberg/Rockbuster_Stealth_SQL_Data_Analysis



INSTACART – GROCERY ANALYSIS

Prompt: You're an analyst for an existing company, Instacart, an online grocery store that operates through an app. Instacart already has very good sales, but they want to uncover more information about their sales patterns. Your task is to perform an initial data and exploratory analysis of some of their data in order to derive insights and suggest strategies for better segmentation based on the provided criteria.

INSTACART – GROCERY ANALYSIS



SKILLS / PROCEDURES

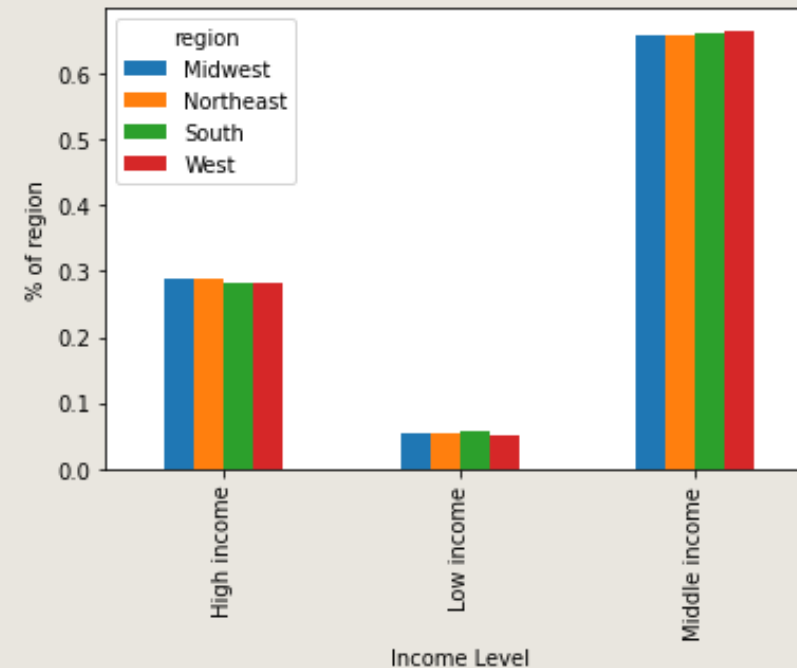
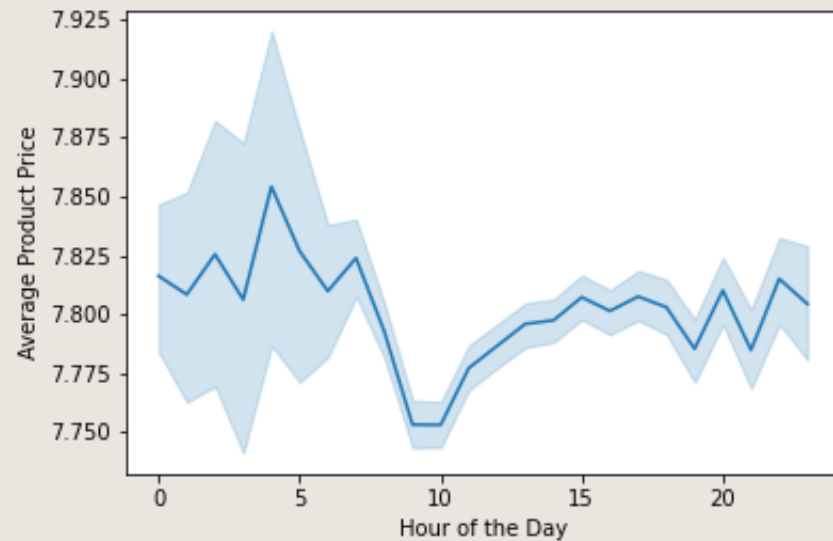
- Data wrangling
- Data merging
- Deriving variables
- Grouping data
- Aggregating data
- Population flows

TOOLS USED

- Python
- Excel

INSTACART - RESULTS

- Open-source dataset provided by Instacart. Contains customer data, purchase history, product data.
- Data cleaned, aggregated, and analyzed using Pandas library in python.
- Visualizations made using Matplotlib and Seaborn libraries in python.
- Link to GitHub Repository: https://github.com/eriesberg/Instacart_Python_Data_Analysis

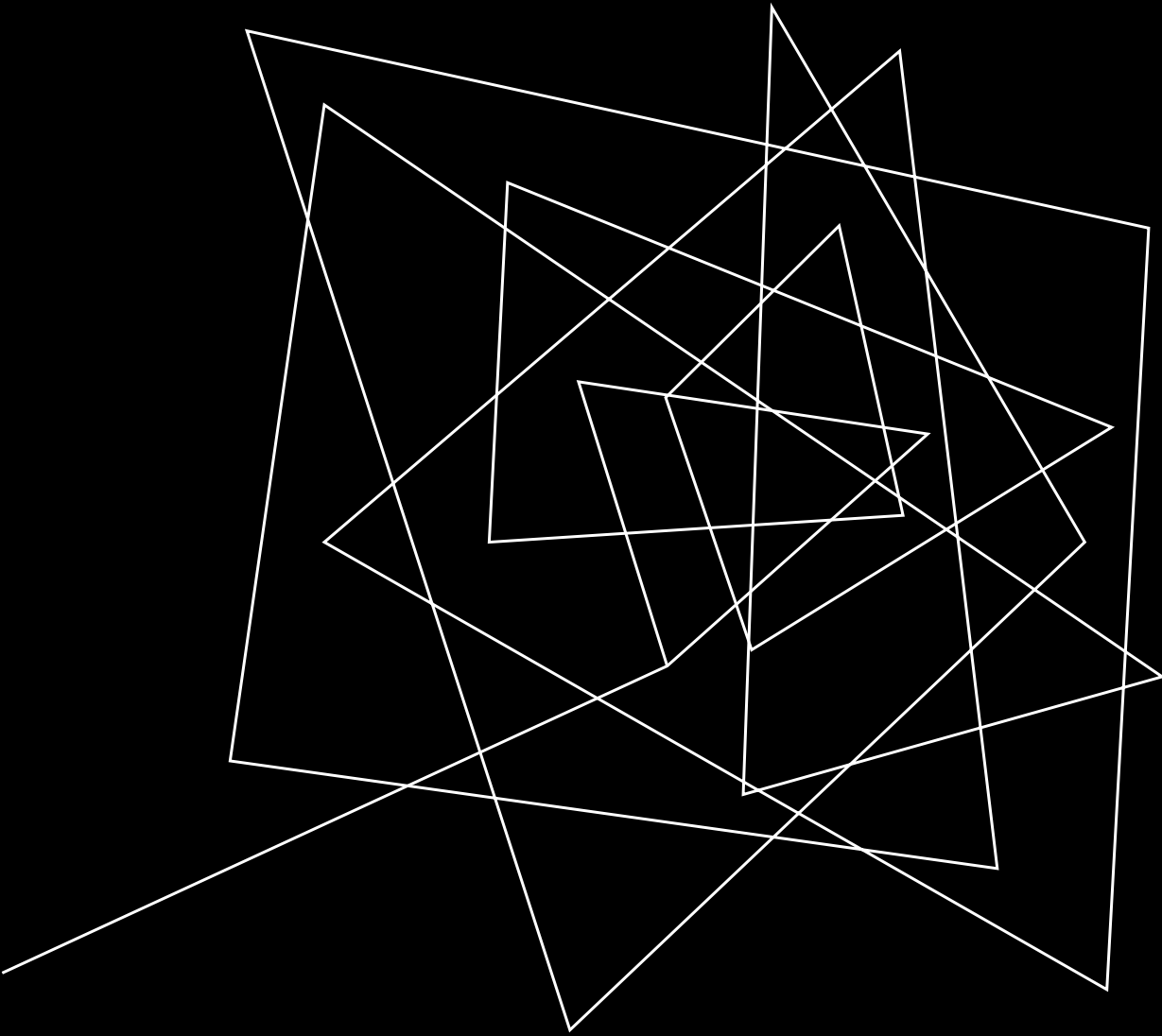




UNEMPLOYMENT DATA ANALYSIS

Thesis: Unemployment in the United States is one of the numbers that is most critical to the health of the Economy. In trying to understand what can help to reduce inflation, we looked at some of the different governmental benefits, and how they relate to unemployment.

UNEMPLOYMENT DATA ANALYSIS



SKILLS / PROCEDURES

- Data wrangling
- Data merging
- Deriving variables
- Grouping data
- Aggregating data
- Visualizing Data
- Regression Analysis
- Clustering

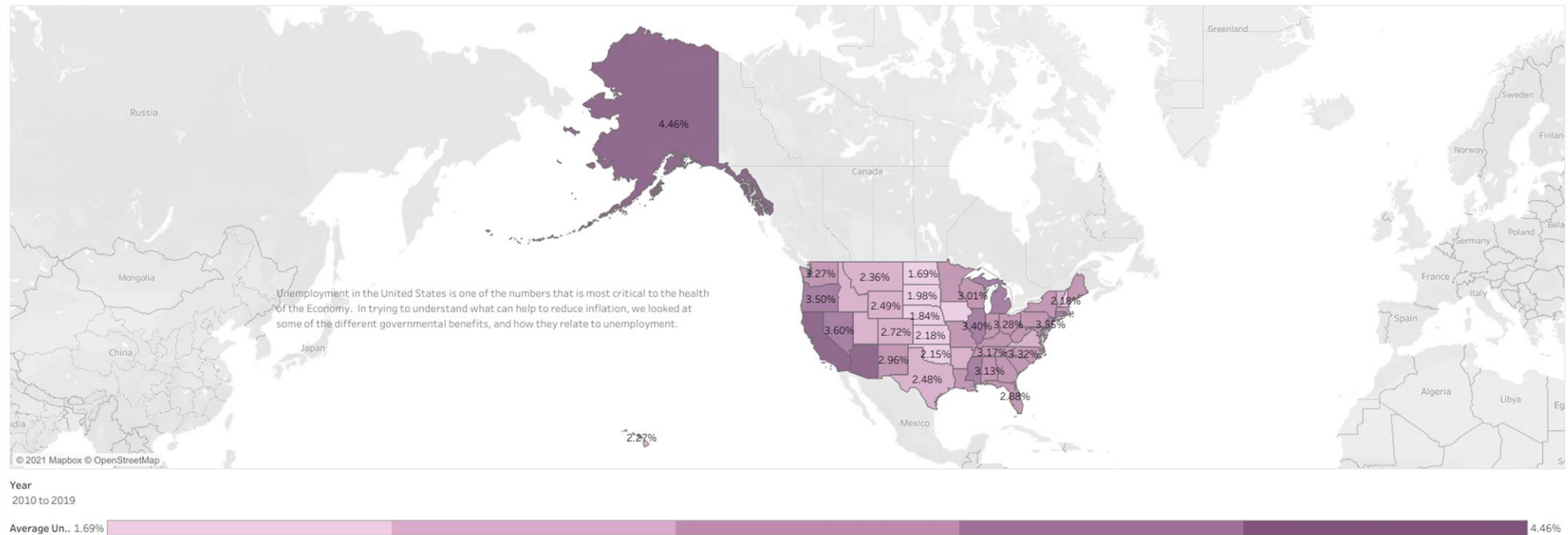
TOOLS USED

- Python
- Tableau

UNEMPLOYMENT - RESULTS

- Dataset sourced from government databases. Granularity level of county-year. Data available for the years 2010-2019.
- Data cleaned, aggregated, and analyzed using Pandas library in python.
- Visualizations made using Tableau.
- Link to GitHub Repository: https://github.com/eriesberg/Unemployment_Analysis

Unemployment Rate



A series of white, thin, overlapping geometric lines on a black background, creating a complex, abstract pattern on the left side of the slide.

THANK YOU

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