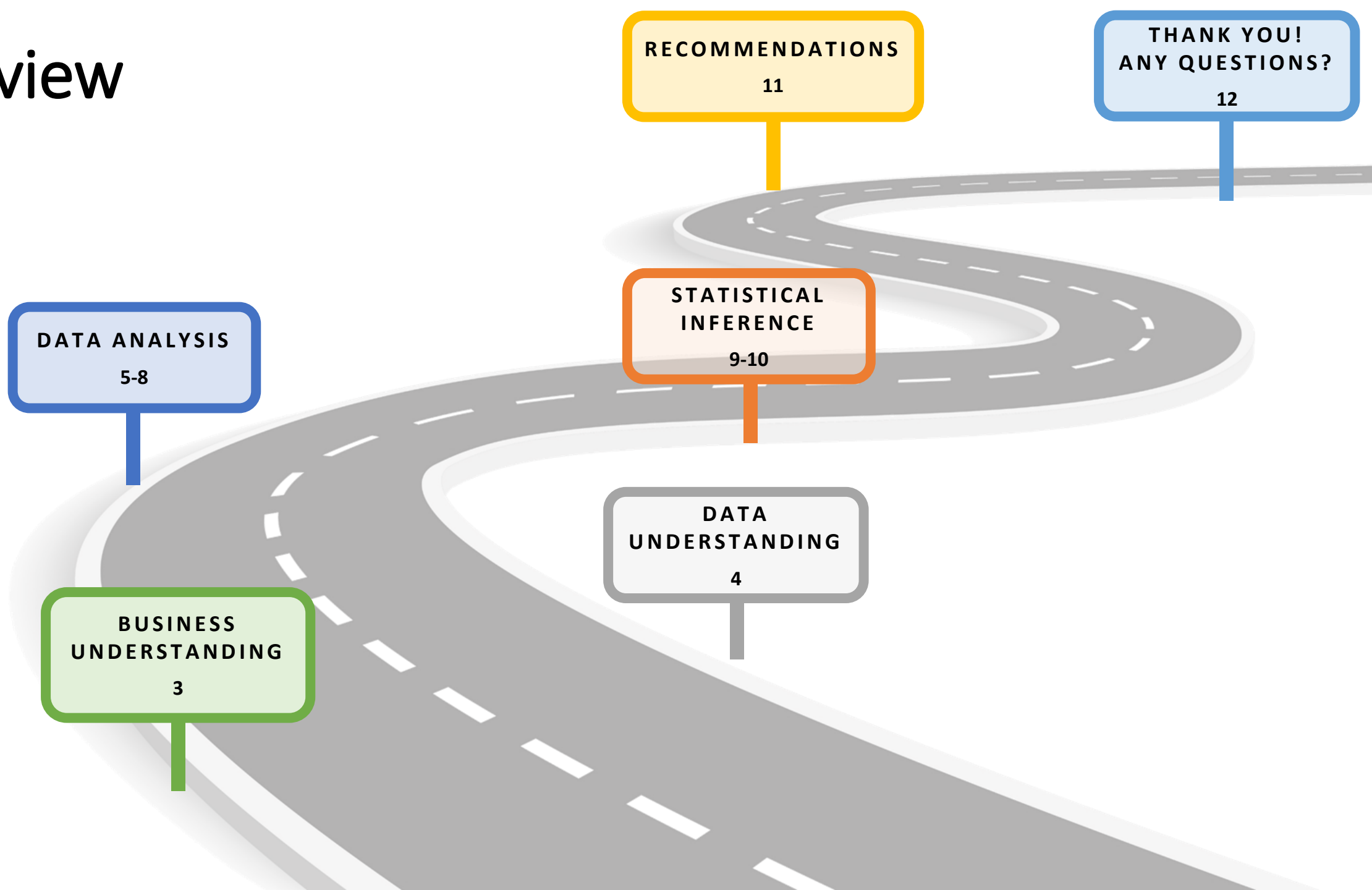


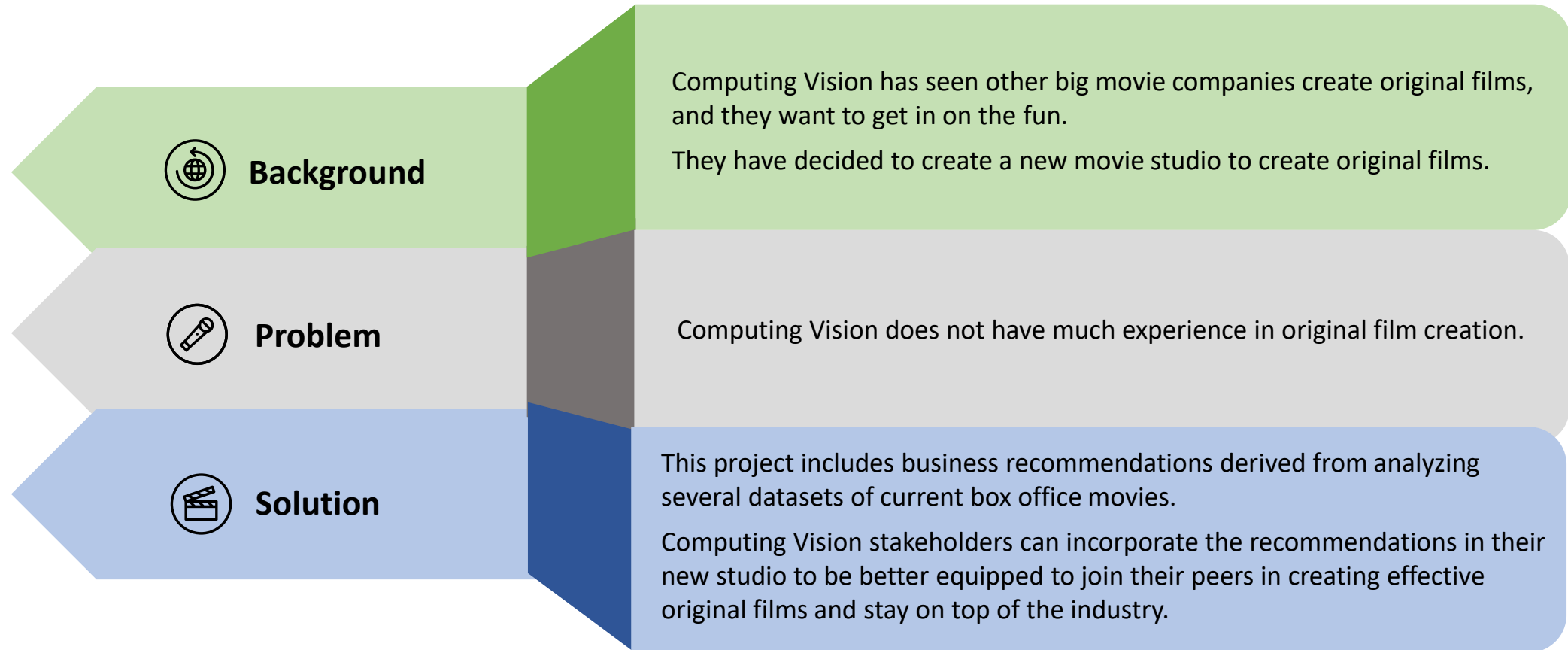


## Computing Vision – Original Film Creation

# Overview



# Business Understanding



# Data Understanding



## Data Sources

- im.db & tn.movie\_budgets.csv
  - Among our dataset options, these two provided extensive and valuable factors to analyze



## Dataset Characteristics

- im.db: 73,000 rows of data
- tn.movie\_budgets.csv: 6,000 rows of data



## Justification for Inclusion

im.db

- Most extensive collection of data to use
- Includes genre and popularity rating data

tn.movie\_budgets.csv

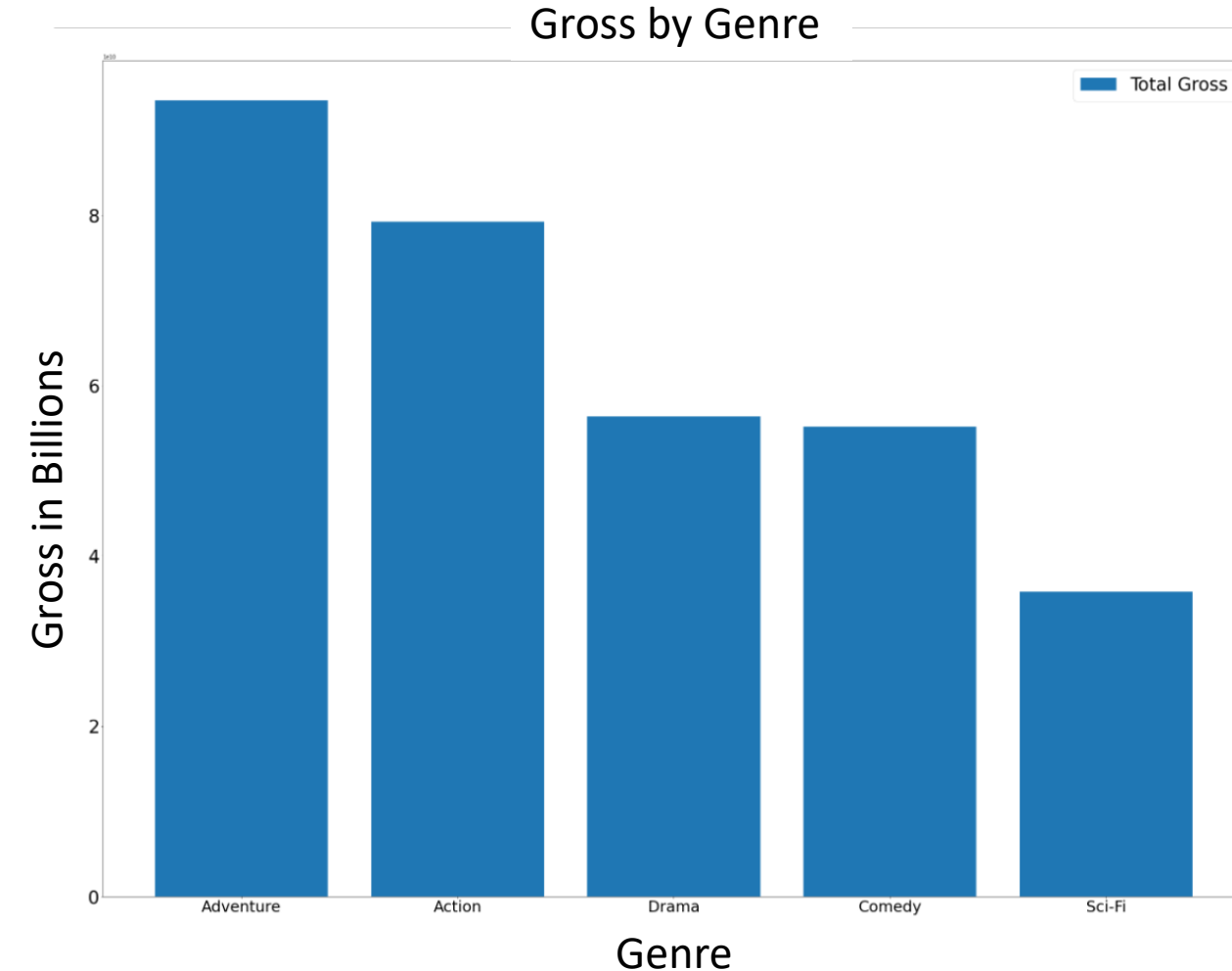
- Includes extensive monetary data and release dates



## Limitations

- We did not have the resources, time, or budget to fully clean the data as desired
  - The dataset was too large to clean in given time

# Data Analysis – Business Recommendation #1

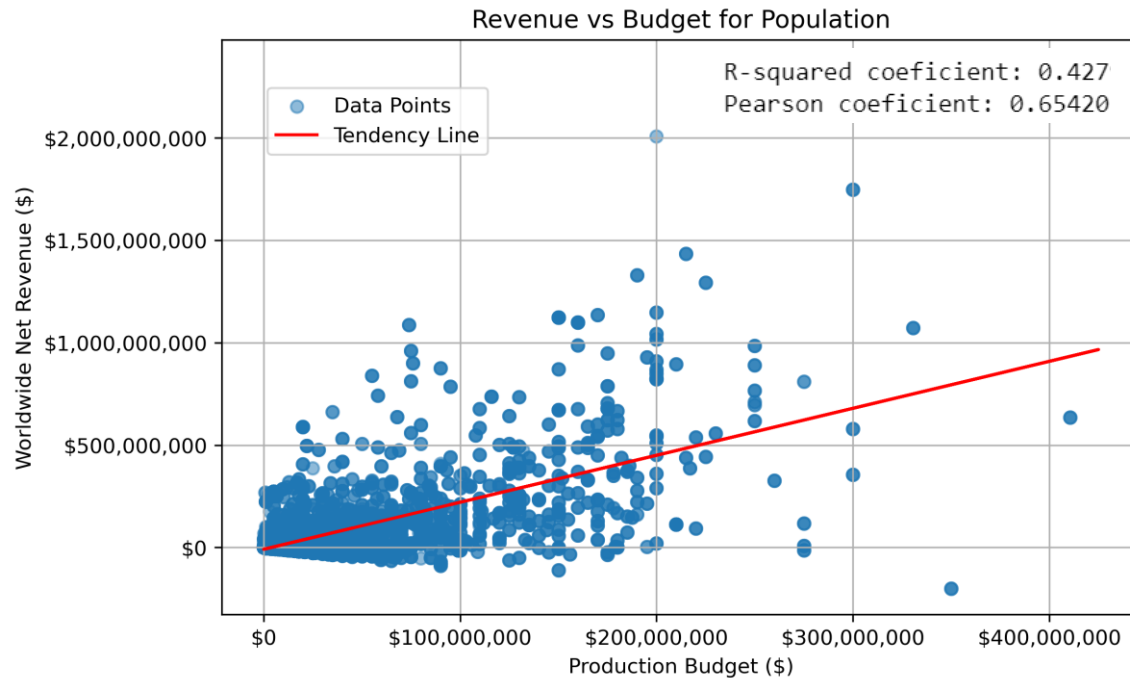


When you want to create a movie, you usually ask yourself:

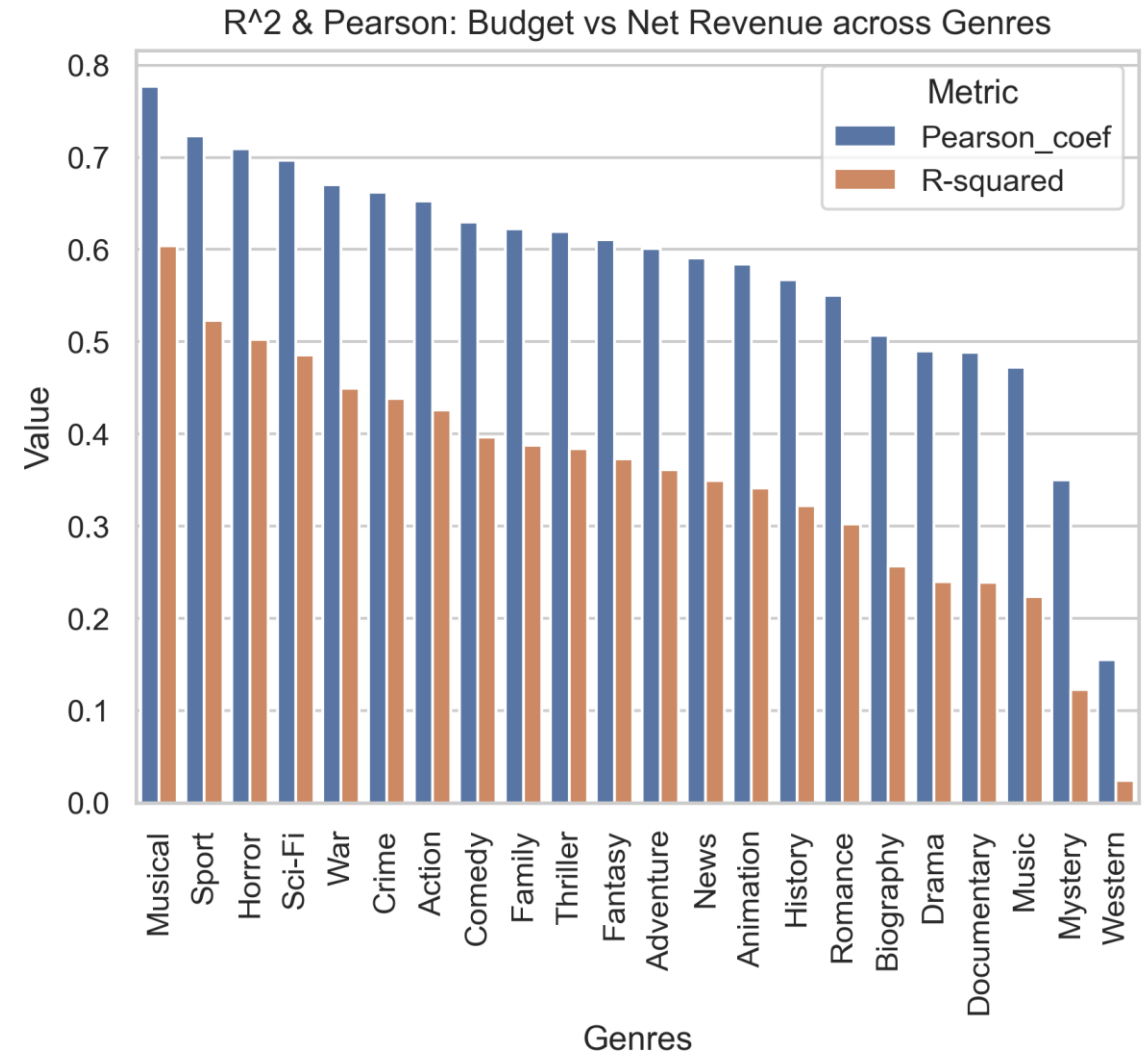
- **What movie genre is the most popular?**
- **How much money that movie collected?**

Analyzing all the worldwide profits and the production cost of some movies with a specific genre we concluded that the three genres that generate more money are **Adventure**, **Action**, and **Drama** genres

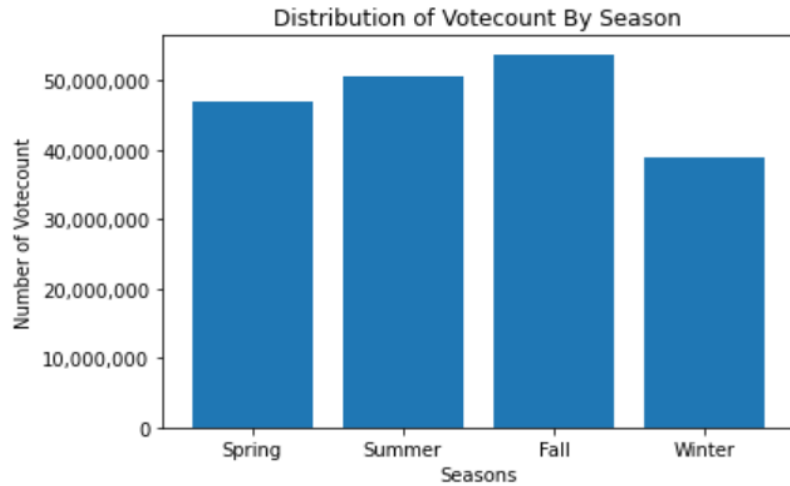
# Data Analysis – Business Recommendation #2



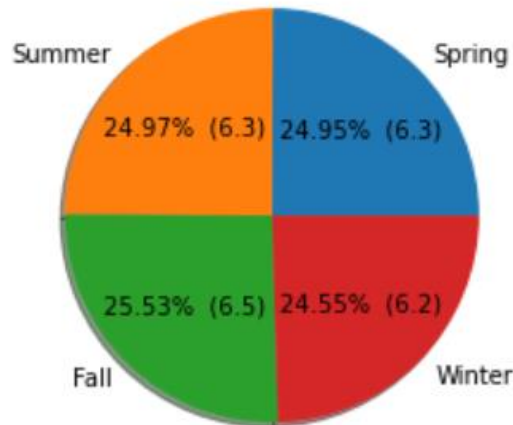
- Budget does not strongly correlate with revenue, and there is no clear indication that revenue variation is influenced by budget, whether for population or across genres.
  - Higher budget does not guarantee higher revenue**



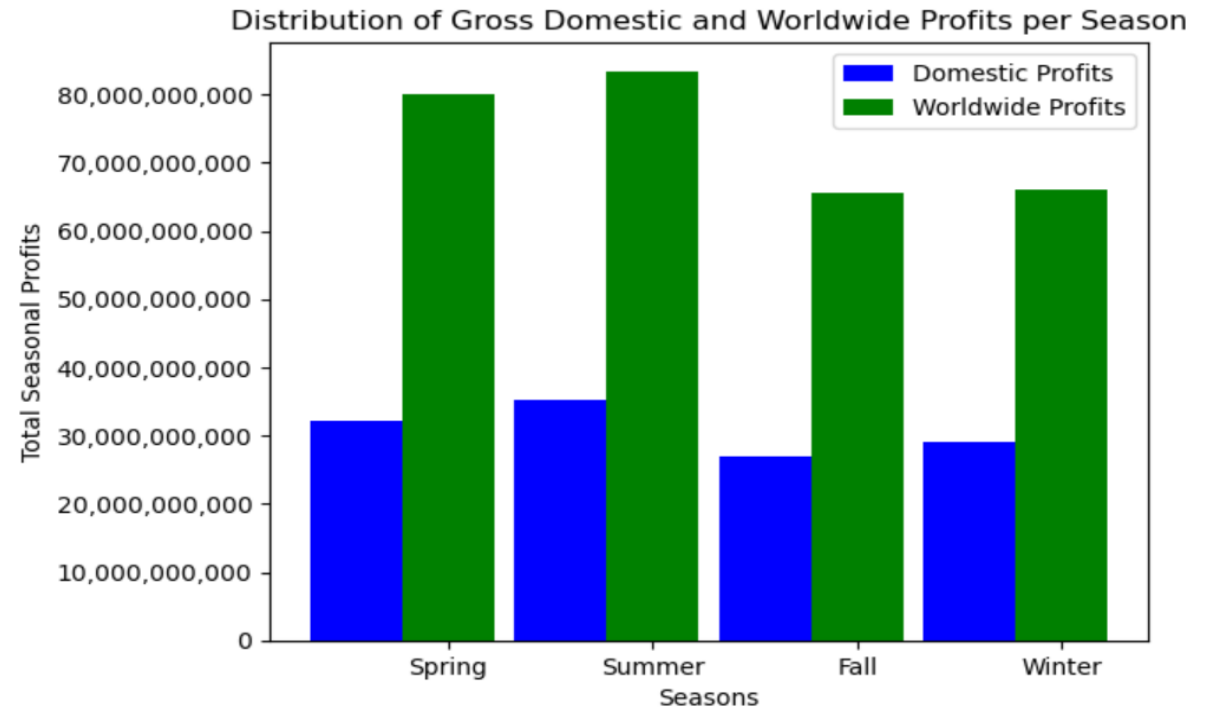
# Data Analysis – Business Recommendation #3



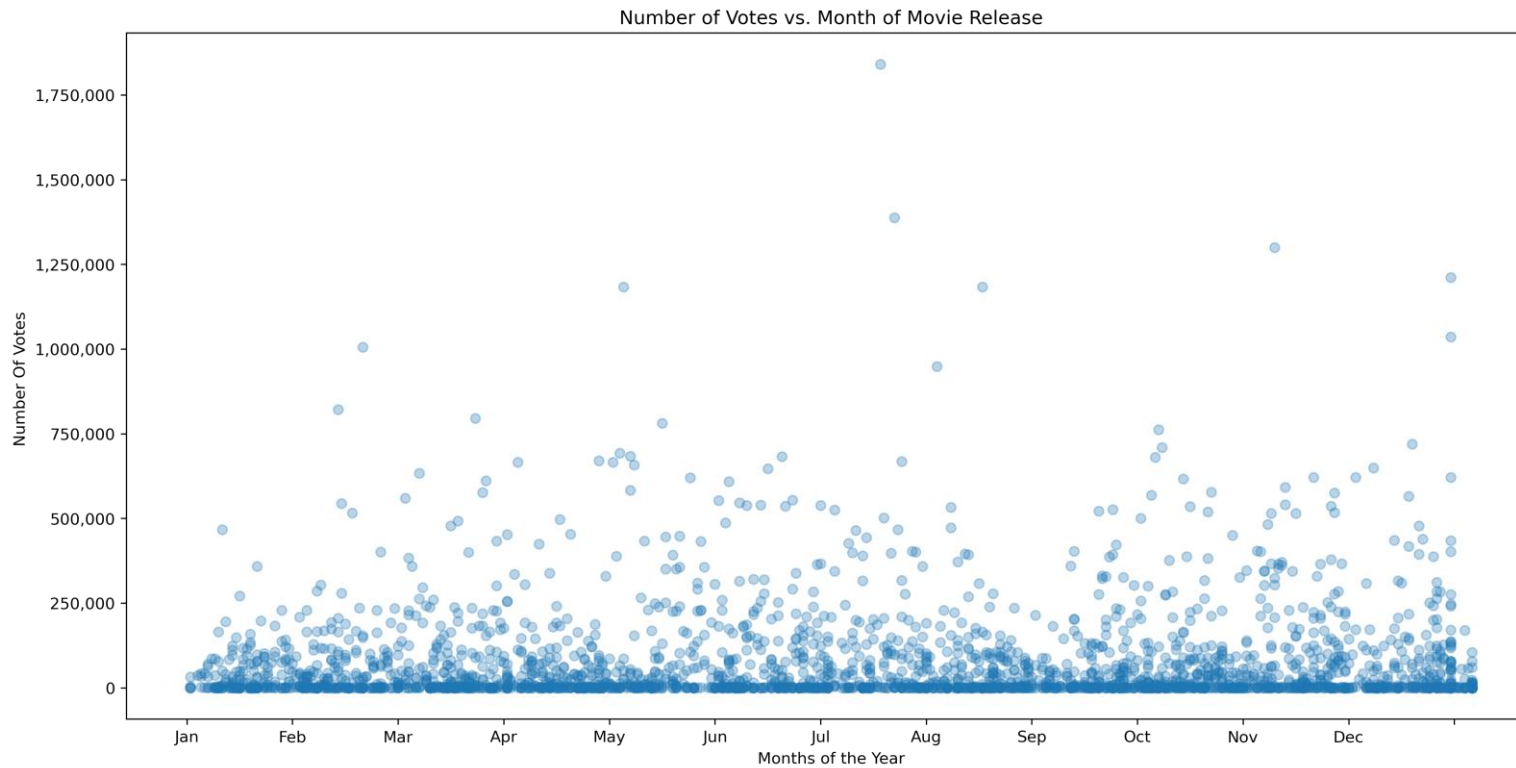
Weighted Average Rating Between Seasons



- Very small distinction between each season for number of movies produced and popularity
  - **Summer-Fall** is the most popular in number of votes
  - **Fall** has the highest **Weighted Average Rating**
- Data displays highest worldwide profit is **Summer**
  - **Large profit gap** between Spring & Summer seasons compared to Winter & Fall seasons



# Data Analysis – Business Recommendation #3



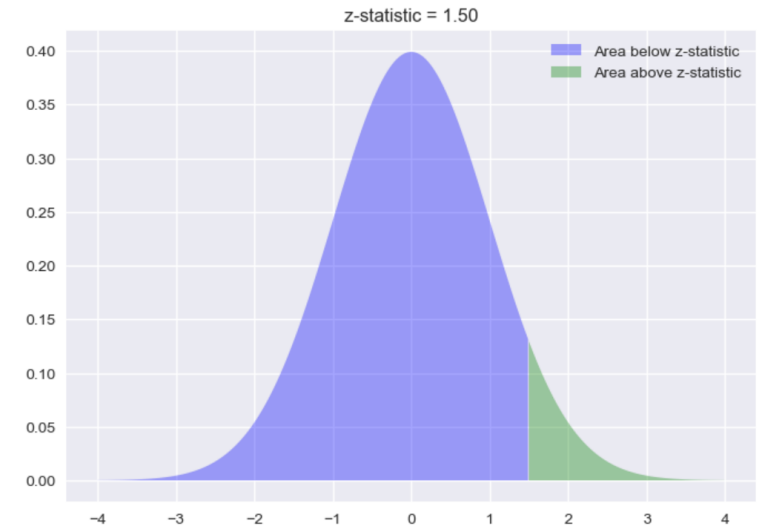
- Popularity between the different month of release and popularity is evenly spread out
  - **Weak Correlation**
- Movies released in the **Summer** is most popular
- Based on our graphical analysis and datasets, we recommend movie release date around **Summer-Fall**



# Statistical Inference

## Hypothesis

- Null Hypothesis: There is no difference between the seasonal release date and gross worldwide profits
- Alternative Hypothesis: There is a difference between the seasonal release date and gross worldwide profits, higher in the Spring & Summer seasons than Fall & Winter seasons



## Testing

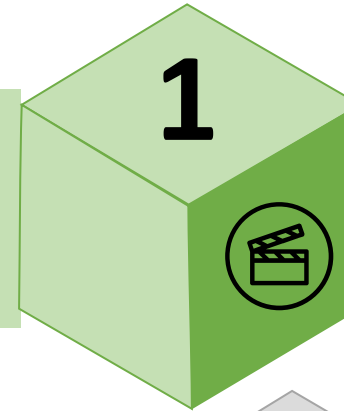
- Conducting a one-tailed Z-Test to calculate the statistical significance for this one direction (greater than value)
- The significance level (alpha) is 0.05, indicating a 95% confidence level that gross worldwide profits are higher during the Spring & Summer seasons
- The Z-Test score is 1.50, p-value= 0.065, meaning movies released in Spring & Summer are in the 93.94th percentile

## Recommendation

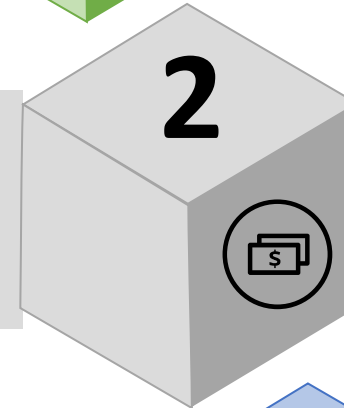
- Recommendation: Since the z-test score revealed a p-value of 0.065, bigger than our alpha 0.05, we fail to reject the null hypothesis, and therefore we cannot recommend (with a 95% confidence level), a specific season to release a movie
- Speculation: Spring & Summer seasonal release dates for a movie will yield higher gross worldwide profits, being that people have more free time and therefore plan for more entertainment, as well as seek indoor venues to escape "warmer" temperatures
- Potential limitation: Given more time for analysis, a test for independence between the variables being examined could be conducted using a Chi-squared test

# Recommendations

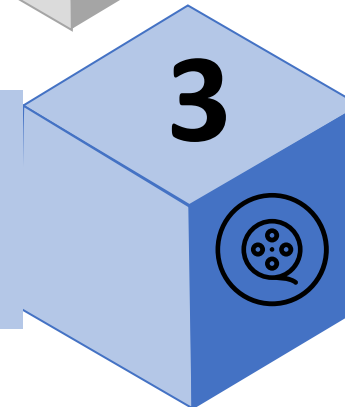
Based on our analysis, the **Adventure** genre generates the highest profitability.



Based on our analysis, bigger budgets **did not** translate to higher revenue. Computing Vision may want to consider **other contributing factors** for increasing revenue.



Based on our findings, release season **did not** affect movie profitability. However, the **Spring & Summer seasons** yield higher gross worldwide profits.



# Thank You! Any Questions?

## Fantastic Five

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