Disney Movie Dataset Analysis Project Report

# Overview

As a beginner data analyst, the goal of this project was to explore the Disney movie dataset using three distinct software tools—Excel, Power BI, and Tableau. Each tool was chosen for its unique functionalities, allowing for a comprehensive analysis that goes beyond traditional methods. By examining financial trends, collaboration networks, and evolving patterns in movie characteristics, this project aimed to identify factors contributing to the success of Disney movies over the years.

## Main Goals of the Project

1. Understand Financial Trends: Analyze Disney’s movie performance over different decades, with a focus on budget and box office revenue to identify patterns in financial success.  
2. Identify Unique Movie Characteristics: Investigate the impact of running time, collaboration networks, and seasonal trends on the movies' box office performance.  
3. Visual Storytelling: Use the power of data visualization to tell the story of Disney's evolution through interactive dashboards and visual analysis.

# Project 1: Financial Analysis Using Excel

## Objective

To uncover insights into Disney's movie production costs, revenue trends, and performance across different eras using Excel's robust data handling and analytical tools.

## Data Cleaning and Preparation

- Created new columns to extract the decade from the release dates to facilitate a time-based analysis.  
- Cleaned and formatted budget and box office figures for uniformity, removing inconsistencies in data presentation.

## Analysis Conducted

1. Era-Based Analysis:  
- Grouped movies by decade to identify financial patterns in production budgets and box office revenues.  
- Used PivotTables to summarize financial performance for each decade, highlighting the most and least profitable periods.  
  
2. Running Time Analysis:  
- Investigated the relationship between movie running time and box office success using scatter plots.  
- Used Excel’s correlation functions to identify potential 'sweet spots' in movie lengths that contribute to higher revenue.

## Visualizations

- Created column charts to showcase the trends in budget and box office success by decade.  
- Developed scatter plots illustrating the relationship between running time and revenue.

## Key Insights

- Identified specific decades with the highest average box office returns, providing insights into Disney’s historical success patterns.  
- Suggested an optimal movie length range for maximum box office performance.

# Project 2: Trend and Collaboration Analysis Using Power BI

## Objective

To explore dynamic, interactive insights into Disney movies' collaboration networks and seasonal trends using Power BI’s advanced visualization capabilities.

## Data Cleaning and Transformation

- Extracted month from the release date to analyze seasonal patterns.  
- Used Power Query to create a new table outlining the collaboration between different production companies.

## Analysis Conducted

1. Network Analysis of Collaborations:  
- Created network visualizations to illustrate Disney’s partnerships with various production companies.  
- Analyzed how these collaborations influenced box office success.

2. Seasonal Success Patterns:  
- Explored the impact of release timing by creating a month-based analysis of box office performance.  
- Developed interactive line charts to uncover which months yielded the highest movie revenues.

## Interactive Dashboards

- Built a dynamic dashboard incorporating filters and slicers for decade, production company, and budget range.  
- Included tooltips in visualizations to provide additional context when exploring collaboration networks.

## Key Insights

- Identified specific months as peak seasons for Disney movie success.  
- Highlighted the most frequent and successful production company collaborations.

# Project 3: Visual Storytelling and Clustering Using Tableau

## Objective

To leverage Tableau's visual storytelling capabilities to uncover patterns and showcase the evolution of Disney movies.

## Data Preparation

- Created a calculated field for the decade to facilitate time-based analysis.  
- Utilized Tableau’s data clustering feature to group movies based on running time and box office performance.

## Analysis Conducted

1. Disney Movie Milestones:  
- Created a timeline visualization to showcase key milestones in Disney’s movie history.  
- Annotated major events and movie releases to tell a story of Disney’s evolution over time.  
  
2. Running Time Cluster Analysis:  
- Used clustering to group movies based on their running time and box office success, revealing hidden patterns in movie characteristics.

## Visual Dashboards

- Developed an interactive dashboard combining scatter plots, bubble charts, and annotated timelines.  
- Enabled filtering and exploration through dynamic elements, allowing users to interact with the data and derive insights.

## Key Insights

- Highlighted the evolution of Disney’s movie characteristics over the decades.  
- Identified clusters representing different patterns in movie lengths and their success, aiding in understanding optimal movie production strategies.

# Conclusion

This project provided a holistic analysis of the Disney movie dataset using Excel, Power BI, and Tableau. The key findings reveal:  
- Financial success varies across different eras, with specific decades standing out for higher box office returns.  
- Collaboration patterns and release timing significantly influence movie performance.  
- Data clustering and timeline storytelling offered insights into optimal movie characteristics for success.  
  
As a beginner analyst, this project served as an opportunity to explore various aspects of Disney’s movie data while applying different data analysis tools. Each software tool contributed unique insights, helping to uncover a comprehensive view of Disney's cinematic journey and success factors.