Movie Recommendation and Analysis System

A system that recommends movies using machine learning and shows trends through visual analysis.

CODE TALKERS ▶

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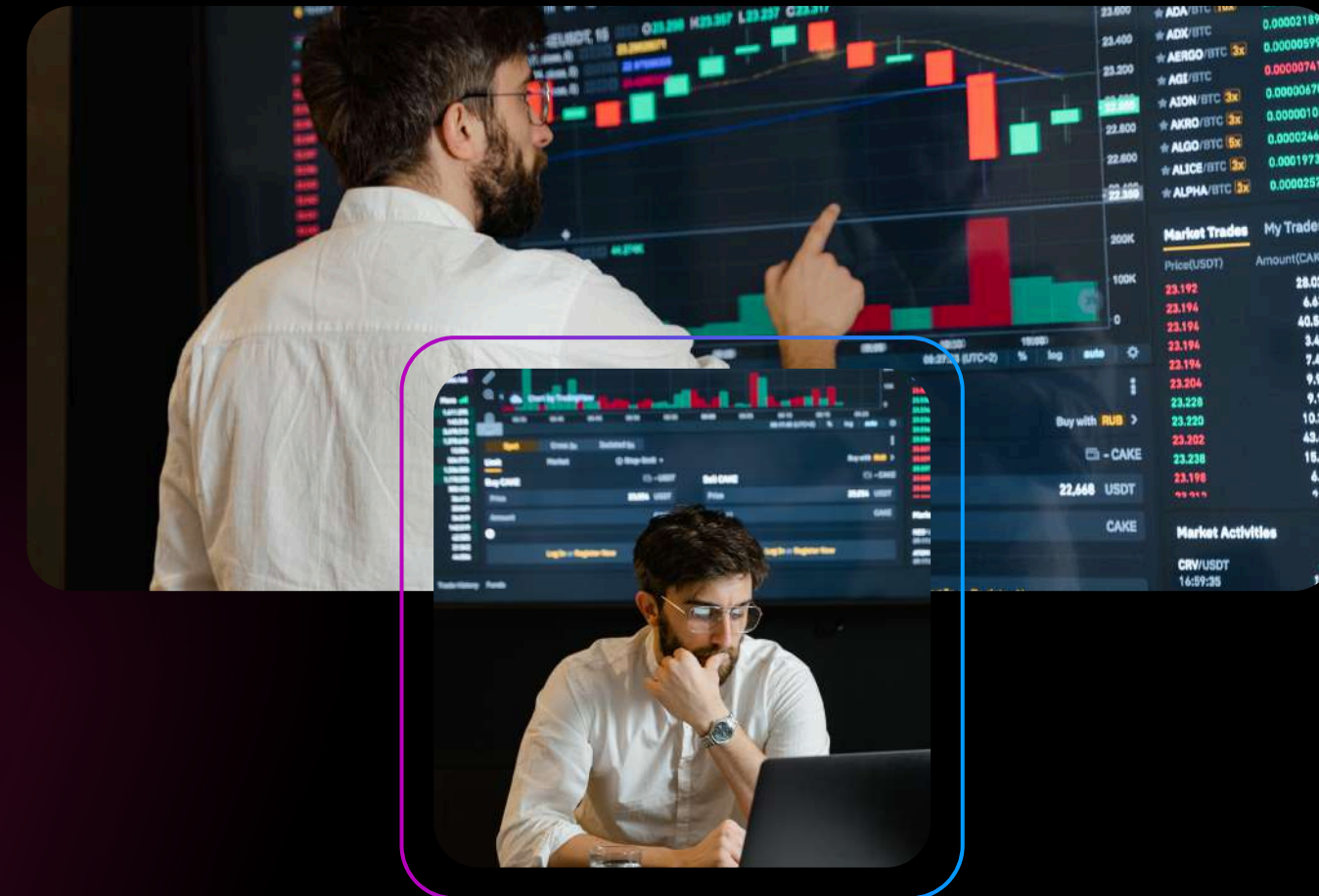Aditya Gopal

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Introduction

This project aims to build a movie recommendation system using machine learning. It will suggest movies based on user preferences and show useful insights through visual analysis.

Learn More

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Problem Statement

With thousands of movies available online, users often struggle to find content they truly enjoy. A smart recommendation system can simplify this process by suggesting relevant movies based on viewing habits and preferences.

Workflow Overview

1. Data Collection (e.g., MovieLens dataset)
2. Data Preprocessing (cleaning, formatting)
3. Model Building (collaborative & content-based filtering)
4. Recommendation Generation
5. Visualization of Trends & Results

Project Objectives

1	Recommend movies using machine learning techniques
2	Analyze user ratings and movie metadata
3	Build a simple and user-friendly system
4	Visualize movie trends, genres, and user preferences

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Tools & Technologies

- Programming Language: Python
- Libraries: Pandas, NumPy, Matplotlib, Seaborn, Scikit-learn, Surprise
- Platform: Jupyter Notebook / Streamlit / Flask
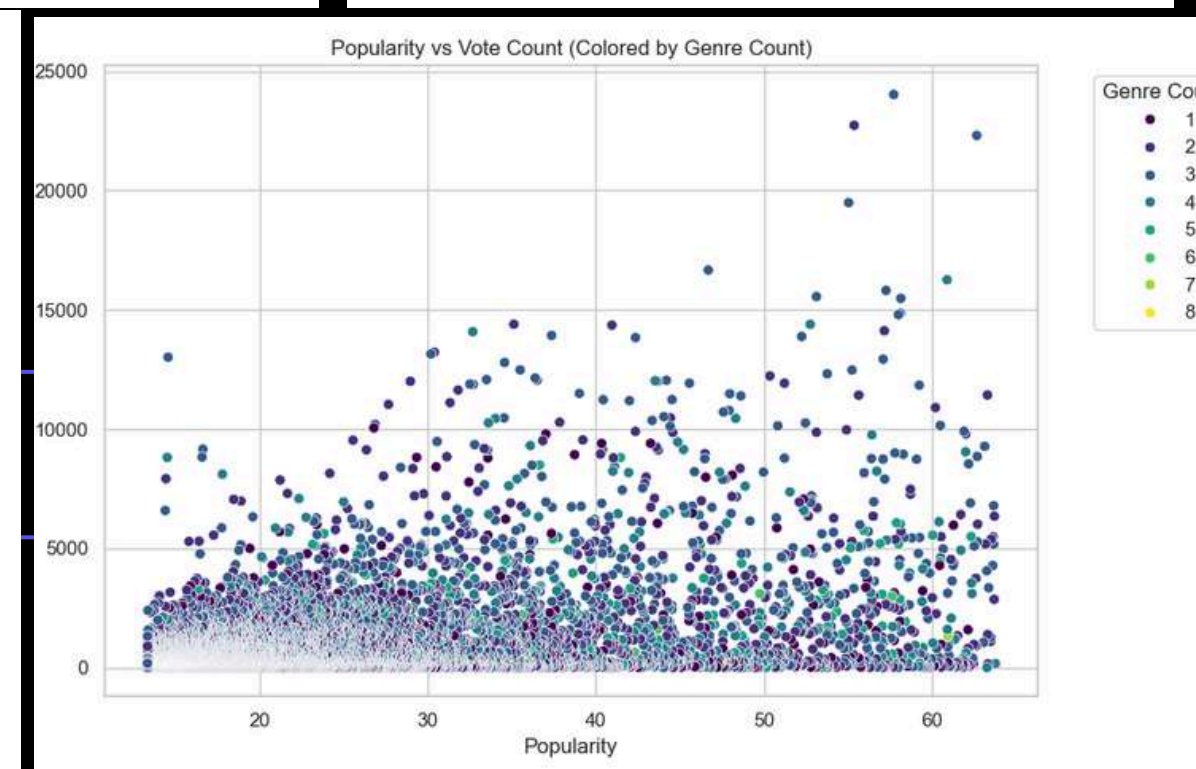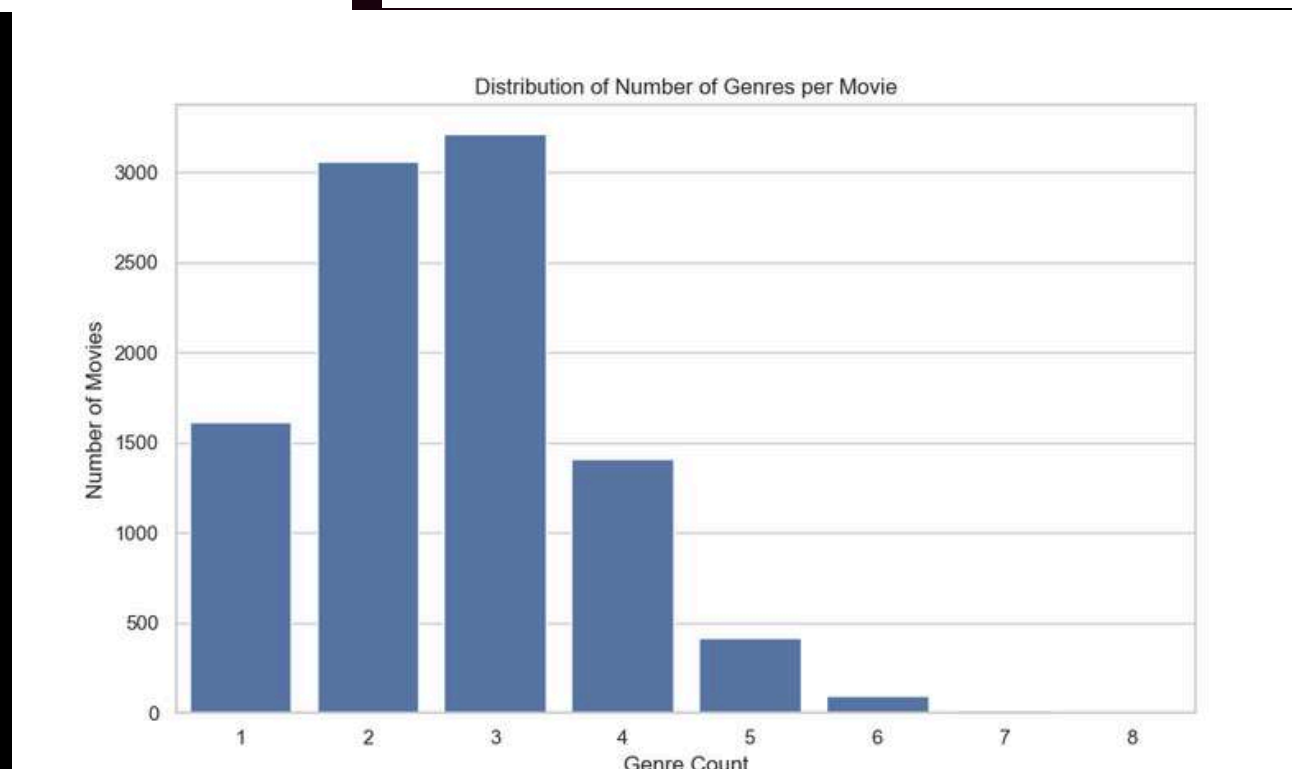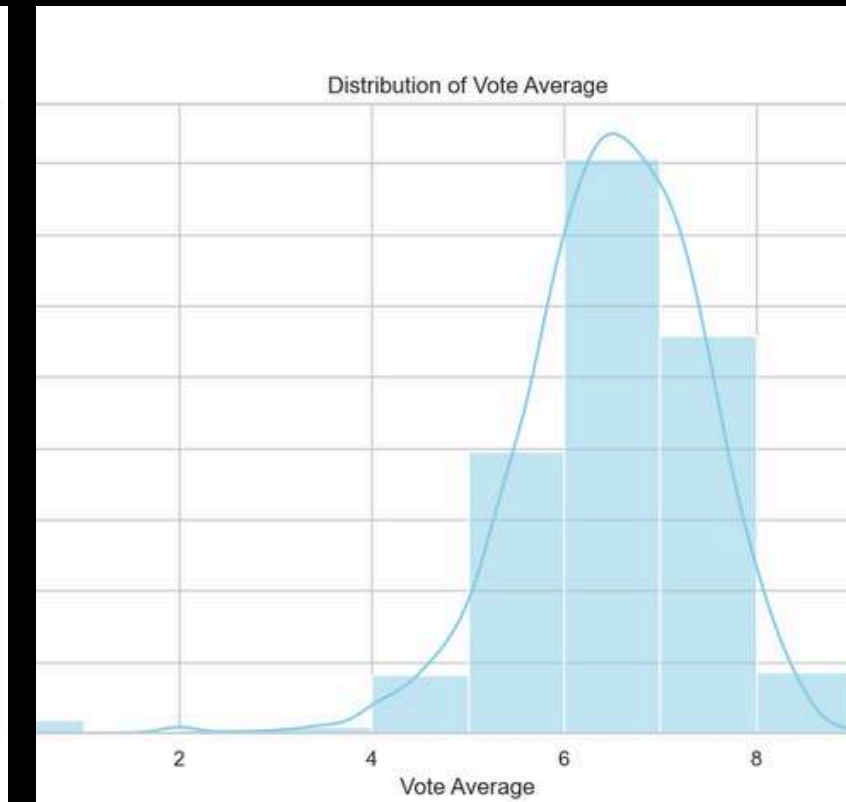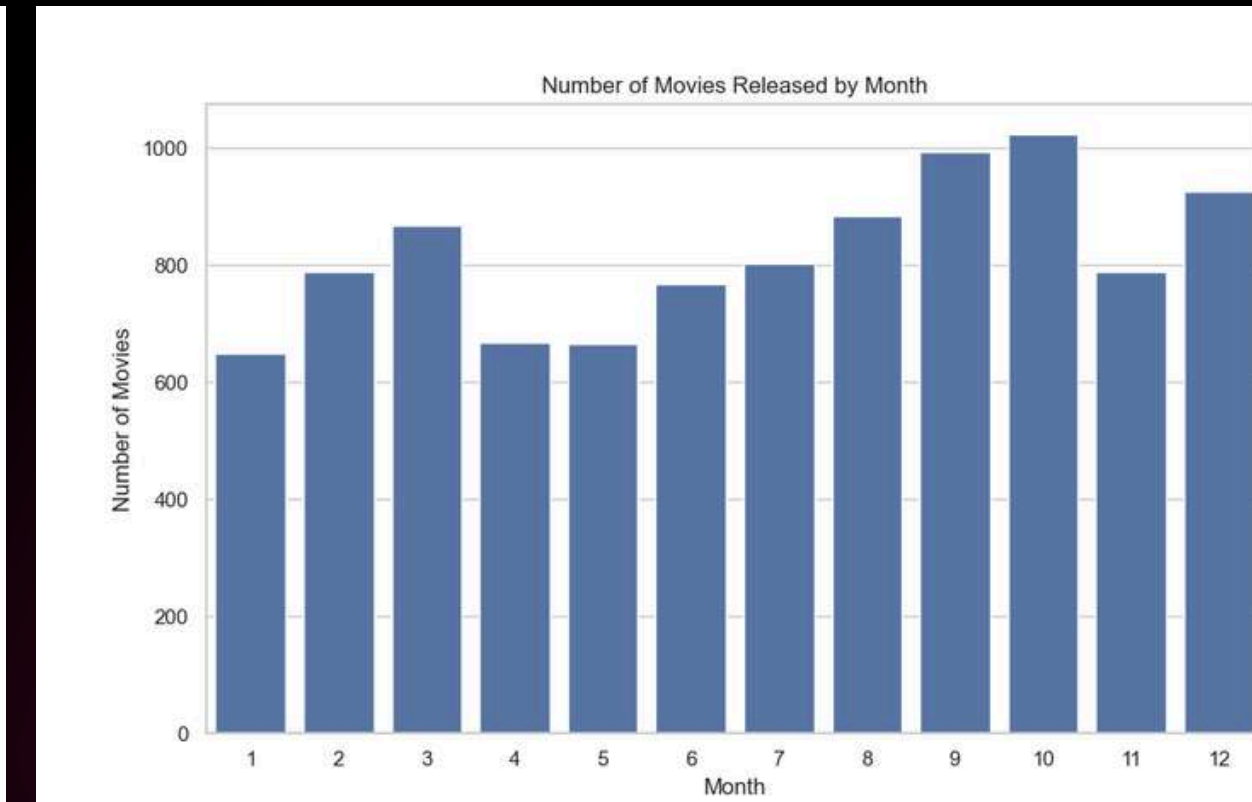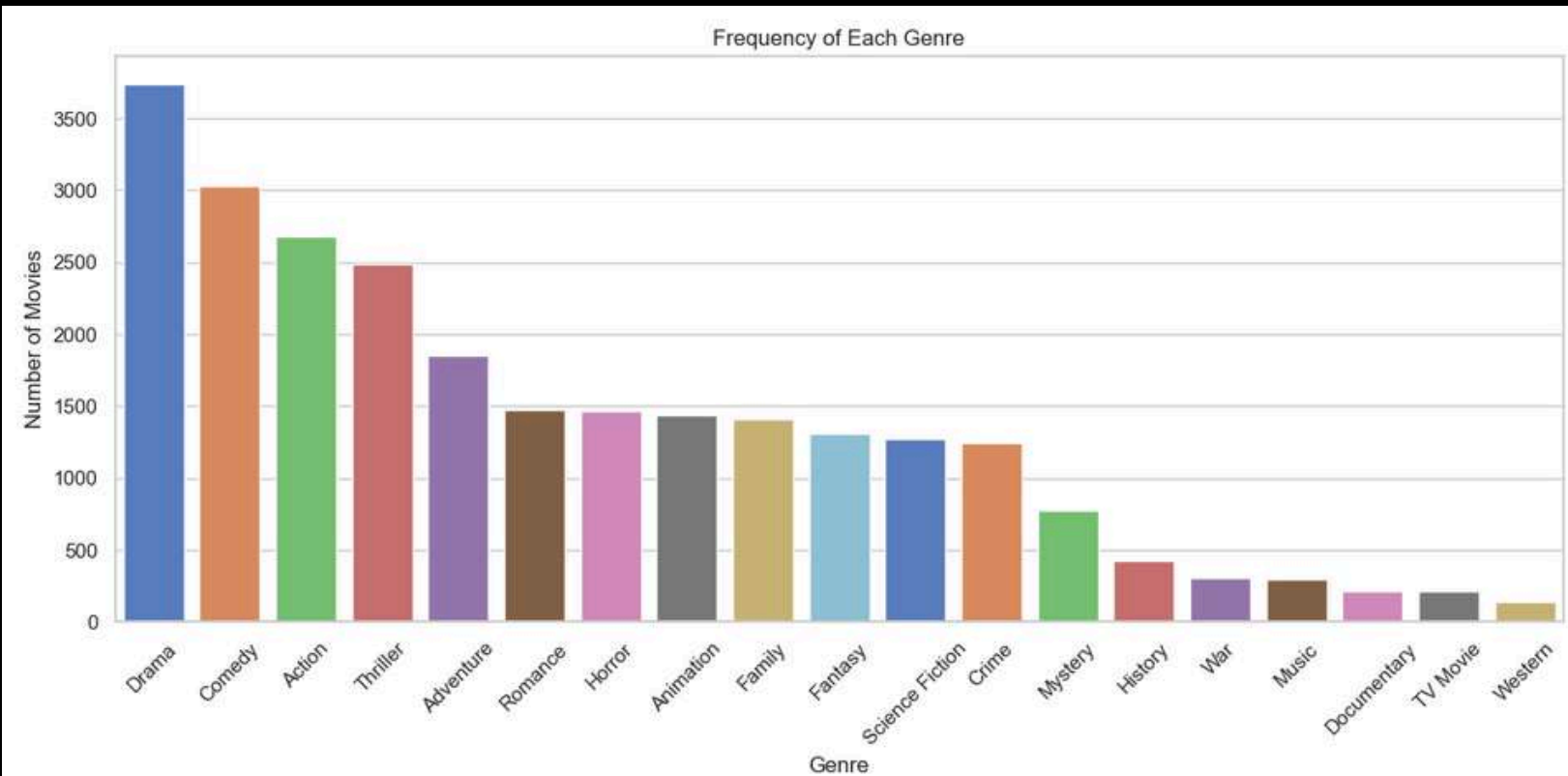- Dataset: MovieLens or TMDb dataset

Outcomes

- A working movie recommendation system
- Clean data visualizations showing user/movie trends
- Improved movie discovery experience for users

Visual Output on next page

Visual Outcomes

Frequency of Each Genre

Number of Movies Released by Month

Distribution of Vote Average

Correlation Heatmap

Distribution of Number of Genres per Movie

Popularity vs Vote Count (Colored by Genre Count)

Thank You

FOR YOUR ATTENTION

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