## **Introduction**

**The Movie Rating Prediction App is a web application developed using Streamlit, designed to predict the rating of a movie based on various input features. This app leverages a machine learning model to make predictions, helping users estimate how well a movie might be rated.**

### **Features**

* **Predict Movie Rating: Input movie details such as year of release, duration, votes, and cast information to predict the movie's rating.**
* **User Inputs: The app allows users to input movie-related features including:**
  + **Year of Release**
  + **Duration (in minutes)**
  + **Votes (in thousands)**
  + **Number of Movies Directed**
  + **Number of Movies by Actors**
  + **Average Ratings of Director and Actors**

### **How It Works**

1. **Input Data: Users provide input data through the Streamlit app interface.**
2. **Feature Engineering: The app processes the input data, creating derived features such as Votes\_Rating.**
3. **Model Prediction: The processed data is passed to a pre-trained machine learning model to predict the movie rating.**
4. **Output: The predicted rating is displayed to the user.**

### **Installation and Running**

**To run the app, follow these steps:**

**Clone the Repository (if applicable):  
bash  
Copy code  
git clone <repository-url>**

**Install Dependencies:  
bash  
Copy code  
pip install streamlit pyngrok**

**Run the Streamlit App:  
bash  
Copy code  
streamlit run app.py**

**Expose the App using ngrok:  
bash  
Copy code  
from pyngrok import ngrok**

**public\_url = ngrok.connect(port='8501')**

**print(public\_url)**

1. **Visit the printed URL to access the app.**

### **File Structure**

* **app.py: Main Streamlit app script.**
* **best\_model.pkl: Pre-trained machine learning model file.**