Predictive Model for Box-office Success of Movies using Social media

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Abstract—Social media comprises interactive applications and platforms for creating, sharing and exchange of user-generated contents. The past ten years have brought huge growth in social media, especially online social networking services, and it is changing our ways to organize and communicate. It aggregates opinions and feelings of diverse groups of people at low cost. Mining the attributes and contents of social media gives us an opportunity to discover social structure characteristics, analyze action patterns qualitatively and quantitatively, and sometimes the ability to predict future human related events. We have assessed how buzz and attention is created for different movies and how that changes over time. Movie producers spend a lot of effort and money in publicizing their movies, and have also embraced the Twitter medium for this purpose. Our hypothesis was the movies that are well talked about are well-watched.[2]

General Terms: Data, Account, User, Algorithm, Admin
Keywords: Social media, Prediction, Likes, Followers, Counting sort, Database,Data extraction

I. INTRODUCTION
In this project our objective is to demonstrate how social media content can be used to predict real-world outcomes. We have focused on the topic of movies which is of considerable interest among the social media user community, characterized both by large number of users discussing movies, as well as a substantial variance in their opinions. In particular, we have used the followers from Twitter.com, similarly, likes on post and movie page of facebook to forecast box-office revenues for movies.

For prediction we have created our website and linked that with the social media like facebook and twitter for extracting likes and followers of the upcoming movies. Extraction of the data from social media is done using App. developer. App. developer acts as an intermediate between social media and our website. App. developer provides ID and secret password of the Facebook movie page and twitter.[2]

We have used PHP coding for designing our website. On our website there is only one admin whereas there are many users. Only admin will be able to post status, photos, videos of the movies on the website. Users can login into their account and can view these posts of the admin. Users can like and give their opinion about these posts of various movies on the website. In the end graph is generated using likes on facebook and website post, followers on twitter on a particular movie page. On the basis of these data, message is displayed whether movie will be hit, superhit, flop or blockbuster.

We can explore more unsupervised machine learnings which would offer more versatile method of predicting movie success. These methods may be based on some computational clustering technique which can be evaluated on the basis of recall and precision values.

II. PROBLEM DEFINITION
The system is a website that has two options for login: Admin and User.
Login:
- Both admin and user are authenticated.
- If both password and username matches with the one in database then they can proceed further otherwise they are redirected to login page.

User:
- After the user logs in, he can give his comments about the movie on our website
- He can view the posts and its number of likes and followers.

Admin:
- The admin can extract and share data from facebook and twitter.
- By extracting the data he will get the number of likes on his facebook post and number of followers on twitter.
- Using this data and data on our website a graph is created.
- The graph predicts the success of a movie i.e. Hit/Superhit/Flop.
Customer:
- The customer (Movie producer) can contact the admin to predict the success of his movie using the contact details form.

III. DEVELOPMENT IDEA
Social media has become ubiquitous and important for social networking and content sharing. And yet, the content that is generated from these websites remains largely untapped. The goal of our system is to analyse and predict the success of a movie on box office using social media. The main objective of this project is to design and implement a prototype of prediction model.

The key stakeholders of this system are:
1. Admin
2. User
3. Movie Producer
4. Development Team

A. Functional Requirements

Admin:
The Admin would log in into the site with his credentials. Then using the data he will predict the success of the movie.

User:
User can post on the website.

Movie producer:
Movie producer can use our website to predict the success of his movie.

Development Team:
The development team will check for any errors in the system. They will generate code for the system and add new features to the system.

B. Non Functional Requirements:
1. The system will be available on all days.
2. Accurate result even at peak time.
3. Only authorized user can have access on our website.

IV. RESULTS
Graph is generated at the end that compares the popularity of the movie among the user of social media like Facebook and twitter as well as the likes obtained on the site. On the basis of the number of likes and followers message is displayed like hit, super hit, flop.
V. DISCUSSION

Admin have used social sites like twitter and facebook. User of these social sites have given their reviews regarding the movie which is used to predict the status of the movie. Our project predicts the future of movie based on the analysis of social interactions between the community’s members. In the case of social media, the enormity and high variance of the information that propagates through large user communities presents an interesting opportunity for harnessing that data into a form that allows for specific predictions about particular outcomes.

Social sites have existing pages like of movie. We have collected the data such as numbers of likes comments, followers from social site like facebook and twitter. Using app.developer we have extracted data from social sites and finally graph is generated showing the status of the movie.

VI. FUTURE SCOPE

We can explore more unsupervised machine learning which would offer more versatile method of predicting movie success. These methods may be based on some computational clustering technique which can be evaluated on the basis of recall and precision values.

- We can explore more algorithms and techniques for the future extraction and classification of parameters influencing movie success to further improve the accuracy of the defect identification system.
- We can further improve the system by reducing complexity. The main objective could be to find best algorithms which optimize the performance and complexity this can be done by changing normalization of input data or by changing sample methods with other possible learning rate parameters.
- The accuracy can also be improved by using more patterns.

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