Mark Myers

C964 Task 2 Part A

Letter of Transmittal

September 18, 2022

Subject: Movie Recommendation Project Proposal

Mrs. Kelly O’Reilly

Movies Plus

123 This Street

Anywhere, USA 11111

Mrs. O’Reilly,

Our current recommendation system is ineffective is providing our customers with high-quality recommendations. Our number one complaint is that they have a hard time finding something to watch since our current recommendations are based purely off of genre. Our quantity of customers has ceased to grow and has been stagnant for quite some time.

I propose a change. It is time to upgrade our recommendation system to provide quality recommendations to the users that they will actually enjoy. While starting off basic and expanding as we grow, I propose that we develop a new system that utilizes machine learning to gather different aspects of the movies. This data will be used to find movies that are quite similar to the ones that the user already likes. We will have additional features being able to view a director’s or actor’s catalogue of work. Research has shown that viewers can be faithful to a specific director or actor. This new program will allow them to be able to easily find what they are looking for.

With these changes, it is projected that our customer base will continue to grow. If our current customers are enjoying our service, they will recommend us to their friends and family. As we grow, we continue to expand and enhance our systems to keep up with the growing demand. Estimated costs for this project total $450,000. We will be able to utilize our current hardware and software to implement these changes, so that is a cost savings right away. This project, when successful, will earn back the costs within the first year of implementation.

I request that I am selected to run this project. I have worked on developing plans and timelines, as well as researching costs already. I also have programming knowledge, and I am CompTIA Project+ certified. I have the knowledge and the people skills to run this project to ensure that it stays on time and within budget.

Thank you for your consideration.

Sincerely,

Mark Myers

Project Recommendation

Problem Summary

The proposed project will be an upgrade to our movie recommendation system. The current system is subpar with recommendations only generated off genres and nothing else. Customer satisfaction is low and our customer base as stopped growing. The proposed project will be able to provide high-quality recommendations to the users. Happy customers recommend the service to their friends and family, and our customer base grows. This will be achieved using machine learning to gather different information about the movies to help narrow down better recommendations.

Application Benefits

Our business needs a better recommendation system. It will make navigating the menus easier. It will make the recommendations better. It will be able to provide users with what they want to see. The business will benefit in having happy customers. If you don’t like a product, are you likely to recommend it to others? Clearly not. If we have happy customers, they will recommend our services to others, and we will continue to grow and have more customers.

Application Details

The program will take information from the columns in the dataset and find commonalities amongst the key words. Machine learning will break down the information and find what commonalities there are to each other. Using a user search, it will take a movie title and find movies that are closely related to the searched movie.

Data Description

Our movie data is converted into a .csv (comma separated values) file of nominal data from our database to import into the program. The columns name, genre, rating, score, writer, director, star, and runtime contain the data of the movies. There are no dependent variables within the data. Some anomalies can be expected within the data. Some movies have their ratings black. These will be labeled as ‘Unrated’.

Objectives and Hypotheses

A recommendation system providing high-quality recommendations will increase customer satisfaction and continued usage of our service. This will be tested by customer surveys during the initial testing and go live phases. We have the objective of having a minimal satisfaction rate of 90%.

Methodology

During the development of this application, we will follow the waterfall methodology. Using this method, we will be able to plan, develop, and test each step of the process to ensure that the current step meets our standards and will set us up for success in subsequent steps. While there are downfalls to this method, such as flexibility, using this method will be the most cost effective for our organization to ensure that we don’t need to go back and rework parts of the application.

Initially, we will be going with a basic interface to get the application launched and get customer satisfaction boosted as soon as possible. In the future, we will work on developing a more attractive interface with additional features that we discover will be useful from utilization and customer feedback.

Funding Requirements

The proposed project has an estimated cost of $450,000. We will be able to utilize our current software and hardware to develop and implement the program. Funding will go towards cloud servers, labor hours, and marketing of the new system. When we are successful with implementation, it is projected that we will earn back the investment within one year.

Data Precautions

There is no sensitive data within the dataset. This dataset was retrieved from Kaggle.com as a public dataset. There will be input checks put into place to ensure that the options that the user selects will be valid choices.

Developer’s Expertise

I have written several programs in Python and Java. I have learned how to use the libraries such as sklearn for machine learning, and pandas for efficient data retrieval. I have received the certification of CompTIA Project+ which will help me to run this project. I have a Bachelor of Science in Computer Science. This will help me to understand how to go about implementation and how to code what is required.