

MINI PROJECT 6TH SEMISTER

NAME :- DUDYALA SAI CHANDRA

SECTION :- E

ROLL NUMBER :- 17

UNIVERSITY ROLL NUMBER :- 2013319

ADMISSION NUMBER :- 18141635

SEMISTER :- VI(6TH)

TOPIC:- Recommendation System:

Recommendation System is a filtration program whose prime goal is to predict the rating or preference of a user towards a domain-specific item or item.

NOTICE:-

This is a program which is made to be able to recommend movies to the user using a simple algorithm in Python, using some simple libraries..

This code is for the mere purpose of understanding how to use and do the recommendation system and for the best understanding of some of the important libraries and how to implement them...

SO THERE ARE SOME STEPS TO UNDERSTAND THE THINGS WHICH WE NEED TO GO THROUGH THE PROJECT FOR THE BETTER UNDERSTANDING AND FOR SOME USEFUL INFORMATION.....

SO I MADE A FEW STEPS AND ALSO SOME IMPORTANT UNDERLYING THINGS WHICH ARE TO BE TAKEN INTO THE ACCOUNT AND ARE TO BE ABLE TO MAKE SOME OF THE THINGS TO BE EASILY UNDERSTOOD....

Step 1:- What are the libraries used in the making of this recommendation system ?

The basic libraries which are used in the code for the implementation of the recommendation system are :

- 1. Pandas**
- 2. Seaborn**
- 3. Matplotlib**

And some of the implementations which are used in the code and are very vastly used in the implementation of the recommendation system...

Step 2:- What is the purpose of these various libraries ?

The main purpose of these libraries is to make sure that the code which is being used, understands what the user's interest is and make it recommends the exact desire of the user...

The purpose of these libraries are :-

- 1. Pandas:-** *pandas is a Python package that provides fast, flexible, and expressive data structures designed to make working with structured (tabular, multidimensional, potentially heterogeneous) and time series data both easy and intuitive. It aims to be the fundamental high-level building block for doing practical, **real world** data analysis in Python.*

2. **SeaBorn:-** *Seaborn is a Python data visualization library based on [matplotlib](#). It provides a high-level interface for drawing attractive and informative statistical graphics.*

***Seaborn** is a library that **uses** Matplotlib underneath to plot graphs. It will be **used** to visualize random distributions.*

3. **Matplotlib:-** ***Matplotlib** is a comprehensive library for creating static, animated, and interactive visualizations in **Python**. **Matplotlib** makes easy things easy and hard things possible. Create. Develop publication quality plots with just a few lines of code*

Step 3:- What are the uses of these libraries:-

1. **Matplotlib:-** ***Matplotlib** is a cross-platform, data visualization and graphical plotting library for **Python** and its numerical extension NumPy. As such, it offers a viable open source alternative to MATLAB. Developers can also **use matplotlib's APIs (Application Programming Interfaces)** to embed plots in **GUI applications***
2. **Pandas:-** *What's cool about **Pandas** is that it takes data (like a CSV or TSV file, or a SQL database) and creates a **Python** object with rows and columns called data frame that looks very similar to table in a statistical software (think Excel or SPSS for example. People who are familiar with R **would** see similarities to R too)*
3. **Seaborn:-** ***Seaborn** is a data visualization library built on top of matplotlib and closely integrated with pandas data*

structures in Python. Visualization is the central part of Seaborn which helps in exploration and understanding of data.

Step 4:- How does the code actually work?

So the main code function is to recommend movies to the user according to his taste and make some graphs and understandable tables to remind the statistics and analyse the users behaviour and to be able to make some valid changes according to the taste fo the user...

The code actually starts with the coder importing the libraries which are used in the code...

Then we make some headers for the user to see what is being recommended to him and how his taste is influencing the recommendation

Then we import the .tsv file which actually contains the most important things like the table data, the graph data and a lot more.

Then we make a variable which is able to read the data which we give from the tsv file...

Then we have an excel file which contains all the data like the movie names and some other important details about the movies....

We merge the variable which has the tsv file about the dataset and the movie title variable..

Then we start grouping of the data and we make the data available to the user and we display it to him and make it easy for him to get recommendations using the seaborn library..

We then give the ratings to the movies based on user input and make some valid changes to the code....

Then we use matplotlib library to make the data in a tabular form and make the data accumulate in a tabular and graphical form...

Then we make the use of the taste of the user and make some real good recommendations.

This is the working and the functioning of the libraries and the full demonstration of the code....

Step 5:- What are the real uses of a system like this ?

Well to answer that question, first we need to see through our life and see what decisions we take day in and day out every second of the awoken time...

I can see your answer is obviously every second...

So why do you even have to worry about the movies which you need to watch and scroll through the entire Netflix or some other streaming platform to be able to watch some good movies, just come to the platform and run the code.... You will be able to watch all the amazing and user recommended movies, The best and the chosen one.....

Results:-

1. THERE ARE SOME THINGS WHICH ARE TO BE LOOKED AFTER IN THIS PROJECT, THE FIRST ONE BEING.... THIS IS THE PROJECT WHICH COMPRISE OF MANY THINGS WHICH ARE IMPORTANT FOR THE STUDY OF COMPUTER SCIENCE AND MUCH MORE SKILL BASED WORKING
2. THIS PROJECT IS USED BY MANY PEOPLE TO MAKE THEIR TIME MORE EFFICIENT AND BE ABLE TO MAKE SOME CHANGES TO THIER ENVIRONMENT

3. UNDERSTANDING THE CODE AND BEING ABLE TO DEVELOP A SIMPLE ALGORITHM TO BE ABLE TO MAKE RECOMMENDATIONS ON A SIMPLE BASIC FUNCTIONS IS A THING TO LEARN
4. THERE HAS BEEN A VERY PROLONG AND PATIENT TRAINING OF THE CODE AND IT IS MAINLY USED TO THE CASE STUDY AND THE PREDICTION OF WHETHER THE GIVEN CODE IS BUG FREE AND LESS COMPLEX OR NOT.....
5. THE MAIN PROBLEM I FACE IN A DAY TO DAY LIFE IS BEING ABLE TO MAKE SOME REAL GOOD USE OF MY TIME AND NOT WASTE MUCH TIME BEING ABLE TO DECIDE WHICH MOVIE TO WATCH AND STUFF, SO I MADE THIS CODE KEEPING IN MIND SOME OF THE PEOPLE WHO ARE IN SAME WAY SUFFERING WITH WHAT TO WATCH...

Things which I have learnt:-

THERE ARE ACTUALLY QUIET A FEW THINGS WHICH I HAVE LEARNT WITH THIS PROJECT:-

- *Some basic understanding of some of the most important libraries of python*
- *Complexity management*
- *How to use the users input and taste to recommend somethings like these*
- *Some more depth knowledge about Python*
- *How these libraries work, how graphs can be created.*
- *How to give a model a data set to work with*

- *How to organise the data such that the user could properly understand the outcomes and the way the code is bring executed..*