RECOMMENDATION SYSTEM PROJECT REPORT

SAKSHAM CHAUDHARY

15th MAY

ABSTRACT

For making this project I have taken around 2-3 days for studying about all different library used in this project like numpy , pandas etc. In this project I have taken dataset from kaggle website.So in this project I have used basic math , correlation to pearson correlation for better recommendation of dataset.

1 INTRODUCTION

1.1 Problem Statement

Make a book recommendation system that is filtration program whose prime goal is to predict the rating or preference of user towards a domain specific item.

1.2 Engineering Design Task

1) In this project first I have use pivot table for help to represent the user who have not voted or have not giving rating to any book denoted as NaN.

2) Pivot converts rating table to 2D matrix.

3) I have used 3 datasets in my project for better comparison and recommendation.

4) I have convert the rating table into 2d matrix for better recommendation.

5) I have use pearson correlation for better recommendation.

2 LIBRARIES & FUNCTIONS

2.1 Pandas Library

Open a local file using Pandas, usually a CSV file, but could also be a delimited text file (like TSV), Excel, etc.

2.2 Numpy Library

NumPy is a Python library used for working with arrays. It also has functions for working in linear algebra, Fourier transform, and matrices and performs other mathematical operations.

2.3 Matplotlib Library

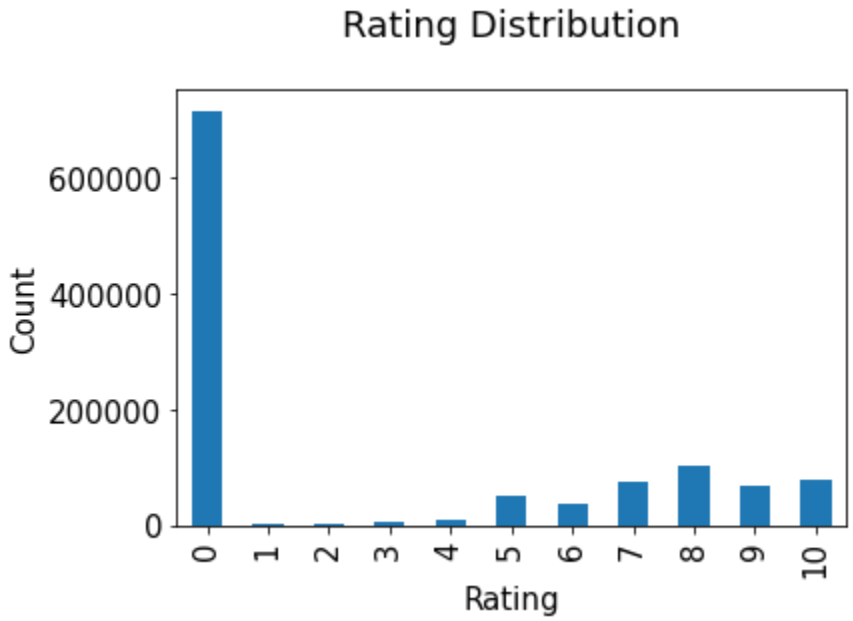
Matplotlib is a library for creating static, animated, and interactive visualizations in Python. With the help of Matplotlib library we can plot bar graphs, pie charts, histograms etc.

2.4 Pivot Table

Pivot converts rating table to 2D matrix. It is also use for eg- for help to represent the user who have not voted or have not giving rating to any book denoted as NaN.

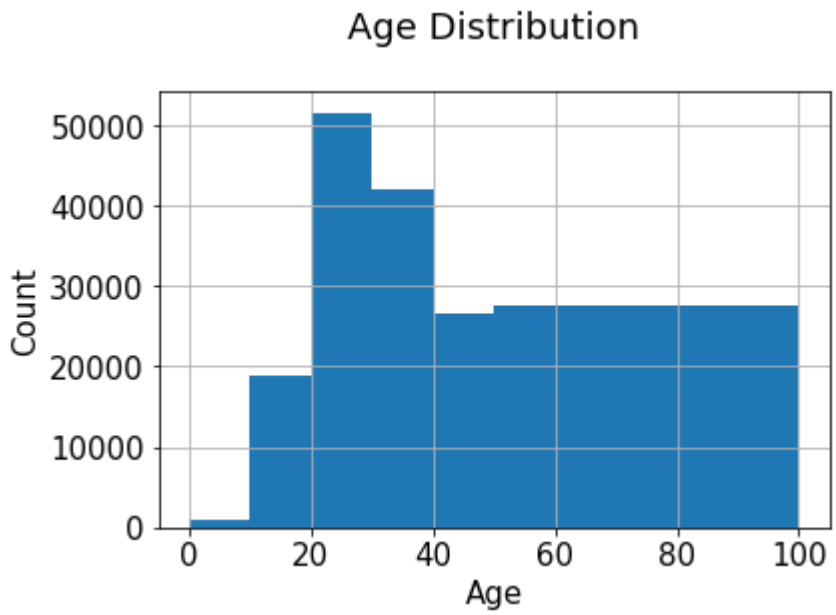
3 Visual Representations Used in Project

3.1



The above graph shows rating distribution in the form of a bar graph.
It shows many how people give book ratings based on age distribution.
Comparison between count and rating as factor in the graph.

3.2

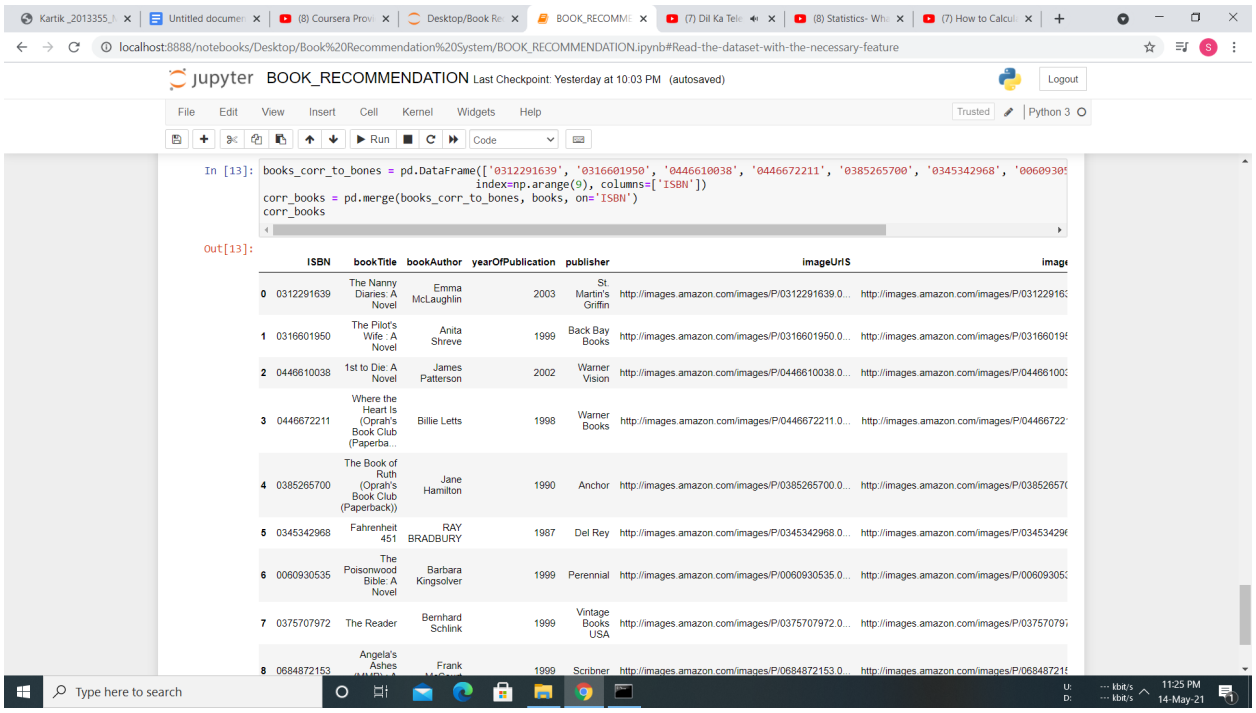


The above graph show age distribution by histogram graph.
It show many how people give book rating based on age distribution.
Comparison between count and age as factor.

4 Conclusions

After implementing my project my conclusions are I have used various data science technique for comparison and recommendation for dataset.
I have basic math , rating counts to recommendation based on correlation techniques for enhancement for recommendation.

Here I am attaching the Screenshot of my final result.



5 References :-

5.1 Numpy

https://numpy.org/devdocs/user/quickstart.html

5.2 Pandas

https://www.tutorialspoint.com/python_pandas/index.html

5.3 Dataset

https://www.kaggle.com/

5.4 Recommendation System

https://towardsdatascience.com/brief-on-recommender-systems-b86a1068a4dd

5.4 Correlation and Covariance

https://towardsdatascience.com/let-us-understand-the-correlation-matrix-and-covariance-matrix-d42e6b643c22

5.5 Pearson correlation

https://en.wikipedia.org/wiki/Pearson_correlation_coefficient

X----X----X----X----X----X----X----X----X----X----X---X----X----X----X----X----X----X----X