

## Plagiarism Scan Report



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None

## **Content Checked for Plagiarism**

import pandas as pd import numpy as np import matplotlib.pyplot as plt # Reading ratings file # Ignore the timestamp column ratings = pd.read\_csv('ratings.csv', sep='\t', encoding='latin-1', usecols=['user\_id', 'movie\_id', 'rating']) # Reading users file users = pd.read\_csv('users.csv', sep='\t', encoding='latin-1', usecols=['user\_id', 'gender', 'zipcode', 'age\_desc', 'occ\_desc']) # Reading movies file movies = pd.read\_csv('movies.csv', sep='\t', encoding='latin-1', usecols=['movie\_id', 'title','genres']) # Check the top 5 rows print(users.head()) # Check the file info print(users.info()) # Check the top 5 rows print(movies.head()) # Check the file info print(movies.info()) # Data Exploration %matplotlib inline import wordcloud from wordcloud import WordCloud, STOPWORDS # Create a wordcloud of the movie titles movies['title'] = movies['title'].fillna("").astype('str') title\_corpus = ' '.join(movies['title']) title\_wordcloud = WordCloud(stopwords=STOPWORDS, background\_color='black', height=2000, width=4000).generate(title\_corpus) # Plot the wordcloud plt.figure(figsize=(16,8)) plt.imshow(title\_wordcloud) plt.axis('off') plt.show() # Get summary statistics of rating ratings['rating'].describe() # Import seaborn library import seaborn as sns sns.set\_style('whitegrid') sns.set(font\_scale=1.5) %matplotlib inline # Display distribution of rating sns.distplot(ratings['rating'].fillna(ratings['rating'].median())) # Join all 3 files into one dataframe dataset = pd.merge(pd.merge(movies, ratings),users) # Display 20 movies with highest ratings dataset[['title','genres','rating']].sort\_values('rating', ascending=False).head(20) Loading... 12/5/23, 1:45 PM DL PROJECT - Colaboratory

https://colab.research.google.com/drive/1jjW8fDKwtPzY7UnGoYsAguVArikaYcDu#scrollTo=TojAc5MX5bc7&printMode=1

2/3 # Make a census of the genre keywords genre\_labels = set() for s in movies['genres'].str.split('|').values: genre\_labels = genre\_labels.union(set(s)) # Function that counts the number of times each of the genre keywords appear def count\_word(dataset, ref\_col, census): keyword\_count = dict() for s in census: keyword\_count[s] = 0 for census\_keywords in dataset[ref\_col].str.split('|'): if type(census\_keywords) == float and pd.isnull(census\_keywords): continue for s in [s for s in census\_keywords if s in census]: if pd.notnull(s): keyword\_count[s] += 1

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convert the dictionary in a list to sort the keywords by frequency keyword\_occurences = [] for k,v in keyword\_count.items(): keyword\_occurences.append([k,v]) keyword\_occurences.sort(key = lambda x:x[1], reverse = True) return keyword\_occurences, keyword\_count # Calling

this function gives access to a list of genre keywords which are sorted by decreasing frequency keyword\_occurences, dum = count\_word(movies, 'genres', genre\_labels) keyword\_occurences[:5] #ContentBased # Break up the big genre string into a string array movies['genres'] = movies['genres'].str.split('|') # Convert genres to string value movies['genres'] = movies['genres'].fillna("").astype('str') from sklearn.feature\_extraction.text import TfidfVectorizer tf = TfidfVectorizer(analyzer='word', ngram\_range=(1, 2), min\_df=0.0, stop\_words='english') tfidf\_matrix = tf.fit\_transform(movies['genres']) tfidf\_matrix.shape from sklearn.metrics.pairwise import linear\_kernel cosine\_sim = linear\_kernel(tfidf\_matrix, tfidf\_matrix) cosine\_sim[:4, :4] # Create two useritem matrices, one for training and another for testing train\_data\_matrix = train\_data[['user\_id', 'movie\_id', 'rating']].values test\_data\_matrix = test\_data[['user\_id', 'movie\_id', 'rating']].values # Check their shape print(train\_data\_matrix.shape) print(test\_data\_matrix.shape) # Build a 1dimensional array with movie titles titles = movies['title'] indices = pd.Series(movies.index, index=movies['title']) # Function that get movie recommendations based on the cosine similarity score of movie genres def genre\_recommendations(title): idx = indices[title] sim\_scores = list(enumerate(cosine\_sim[idx])) sim\_scores = sorted(sim\_scores, key=lambda x: x[1], reverse=True) sim\_scores = sim\_scores[1:21] movie\_indices = [i[0] for i in sim\_scores] return titles.iloc[movie\_indices] genre\_recommendations('Good Will Hunting (1997)').head(20) genre\_recommendations('Toy Story (1995)').head(20) genre\_recommendations('Saving Private Ryan (1998)').head(20)

## Sources

## 13% Plagiarized

Content\_Based\_and\_Collaborati...

https://github.com/khanhnamle1994/movielens/blob/master/Content\_Based\_and\_Collaborative\_Filtering\_Models.ipynb



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