Abstract

Recommender systems are algorithms aimed at suggesting relevant items to users (items being movies to watch, text to read, products to buy or anything else depending on industries). Here we built to recommend and predict anime for users. explore the contents of this dataset to gain insights by

- Analysis
- Evaluation

The goal of this project is to recommend and make predictions about a user's taste of what a user will want to watch later.

Design

- **Data Loading**
- **Data Exploring**
- **Data Cleaning**
- **Data visualization**
- **Data Preprocessing**
- **Data splitting**

Data

provided by Kaggle website

anime1.csv

rating.csv

https://www.kaggle.com/CooperUnion/anime-recommendations-database?select=rating.csv

Algorithms

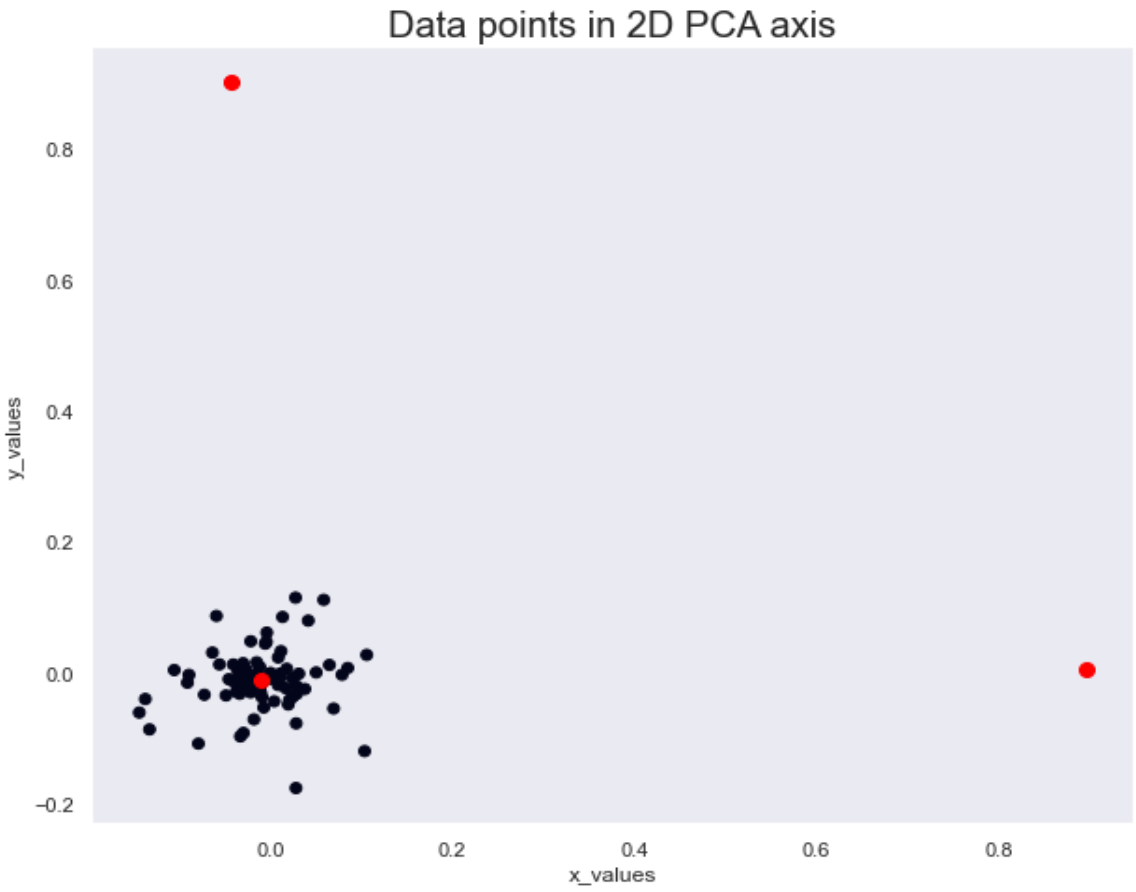
Collaborative Filtering

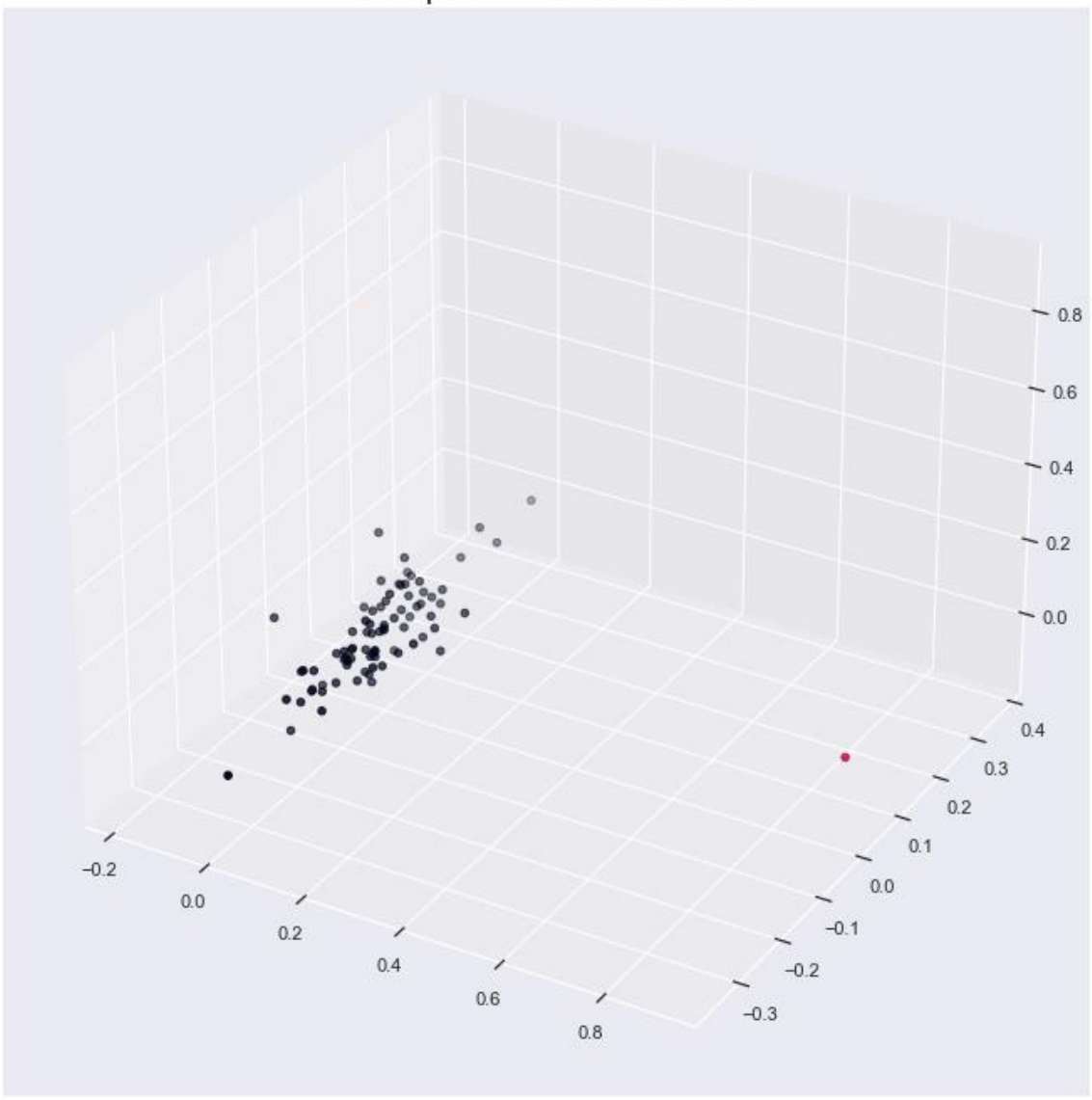
Content-Based Filtering

KNN Model

Principal Component Analysis (PCA)

Cluster: K-means




Data points in 3D PCA axis
0.8
0.6
0.4
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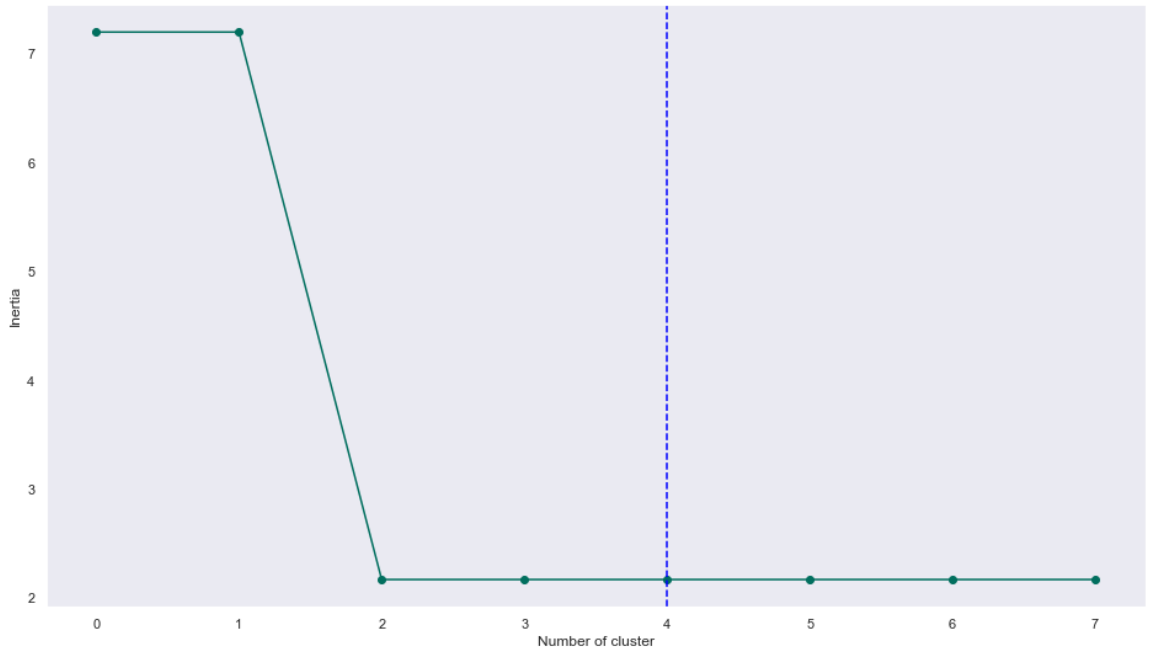
Inertia
7
6
5
4
3
2
0
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3
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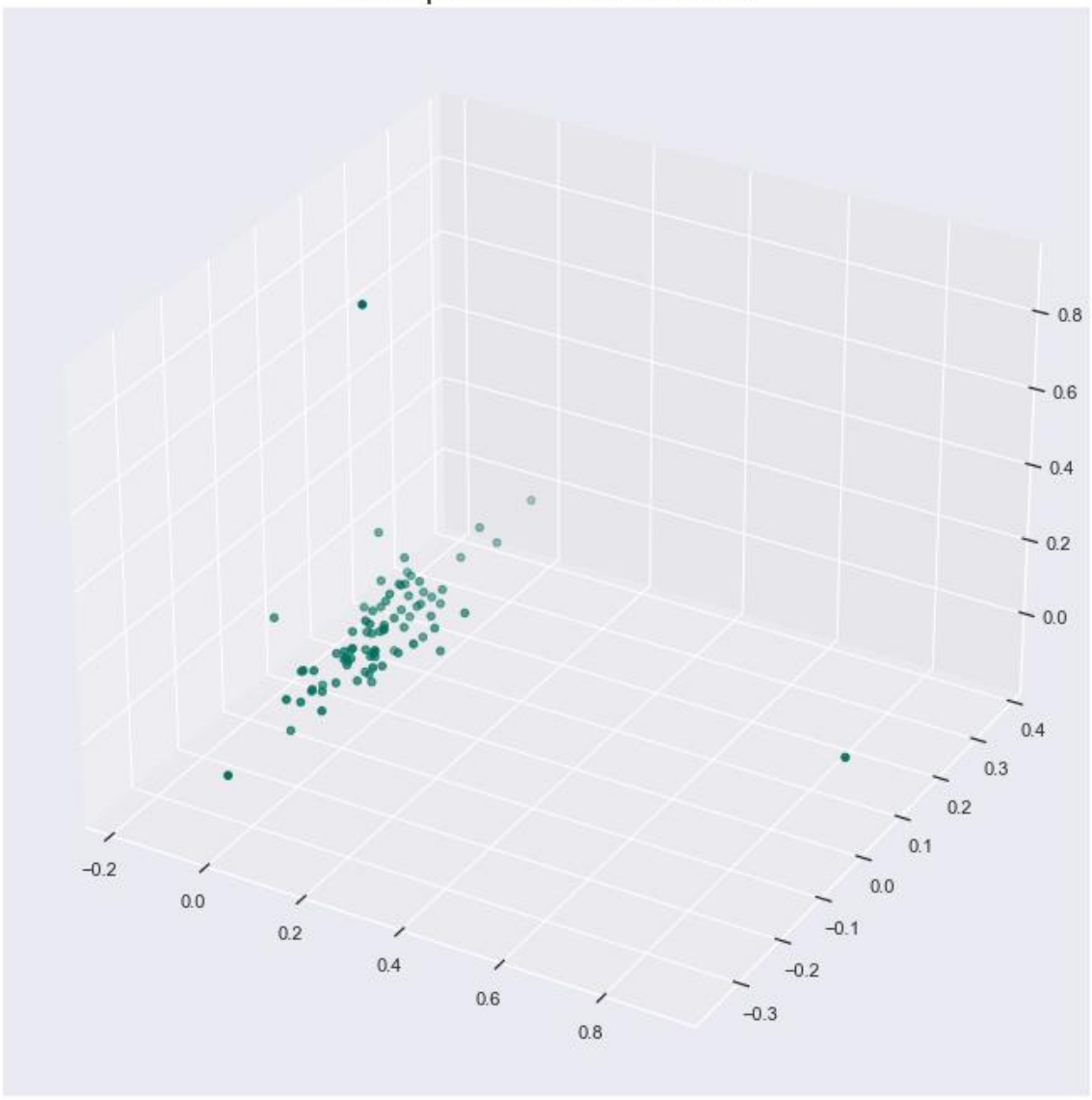
7
Number of cluster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Tools

- **Numpy and Pandas for data manipulation**
- **Scikit-learn for modeling**
- **Matplotlib and Seaborn for plotting**
- **Tableau for interactive visualizations**