

EARIN project Final report

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1 Introduction

The goal of our project was to create a model for anime recommender. After entering anime name from the database model should output recommended animes.

2 Used data and algorithms

2.1 Data

We used different dataset from originally specified in the project description. We decided to use Anime Recommendation Database from Kaggle: [LINK](#). Main reasons why we decided to use this database was that it was bigger than original one, was more recent, it was described as being 100% usable by Kaggle and still had decent amount of code examples.

We are mostly interested in `rating_complete.csv` file which contains information about anime ratings from users who completed the anime.

2.2 Algorithms

We decided to use collaborative filtering to develop our model. It makes personalized recommendations based on preferences of similar users.

We represent anime data-set as embedding vector.

We use K-nearest neighbors model and decided to test it out with different

metrics, neighbors and algorithms

2.2.1 Algorithms

We decided to test our model with 3 algorithms:

1. Ball Tree
2. KD Tree
3. Brute

2.2.2 Neighbor number

We decided to test our model with 5 different neighbor amount:

1. 5
2. square root of available data
3. half of available data
4. logarithm of available data
5. n-1 neighbors

3 Intermediate results

3.1 Results

3.2 Insights

4 Using program

4.1 Arguments

4.1.1 Default arguments

4.1.2 Reproducing

5 Final experimental results

5.1 Experiments

5.2 Results

5.3 Disussion

5.4 Comparison

6 Challenges

6.1 Challenges themselves

6.2 Tackling challenges

7 Conclusions

Best algorithm

7.1 Solution satisfaction

7.2 Potential improvements