

ceflynn / **Movie-Recommendation-System** Public

Flatiron School Phase 4 Project

☆ 0 stars 🍴 0 forks

☆ Star

👁 Unwatch ▾

<> **Code** ⌚ Issues 🔗 Pull requests ▶ Actions 📁 Projects 📖 Wiki 🛡 Security 📈

🔑 main ▾

...



ceflynn readme updated ...

11 seconds ago ⌚ 29

[View code](#)

☰ README.md



Netflix New User Movie Recommendation System



Overview

The goal is to produce 5 recommendations based on user's ratings of movies.

This project is for educational purposes and Netflix has no actual affiliation with the producer or the results.

Business Problem

Netflix is looking to improve their recommendation system for new users. As part of a new trial membership program Netflix is looking to maximize their customer retention by providing the best possible recommendations. It is important that this new recommendation system will also improve recommendations for existing customers.

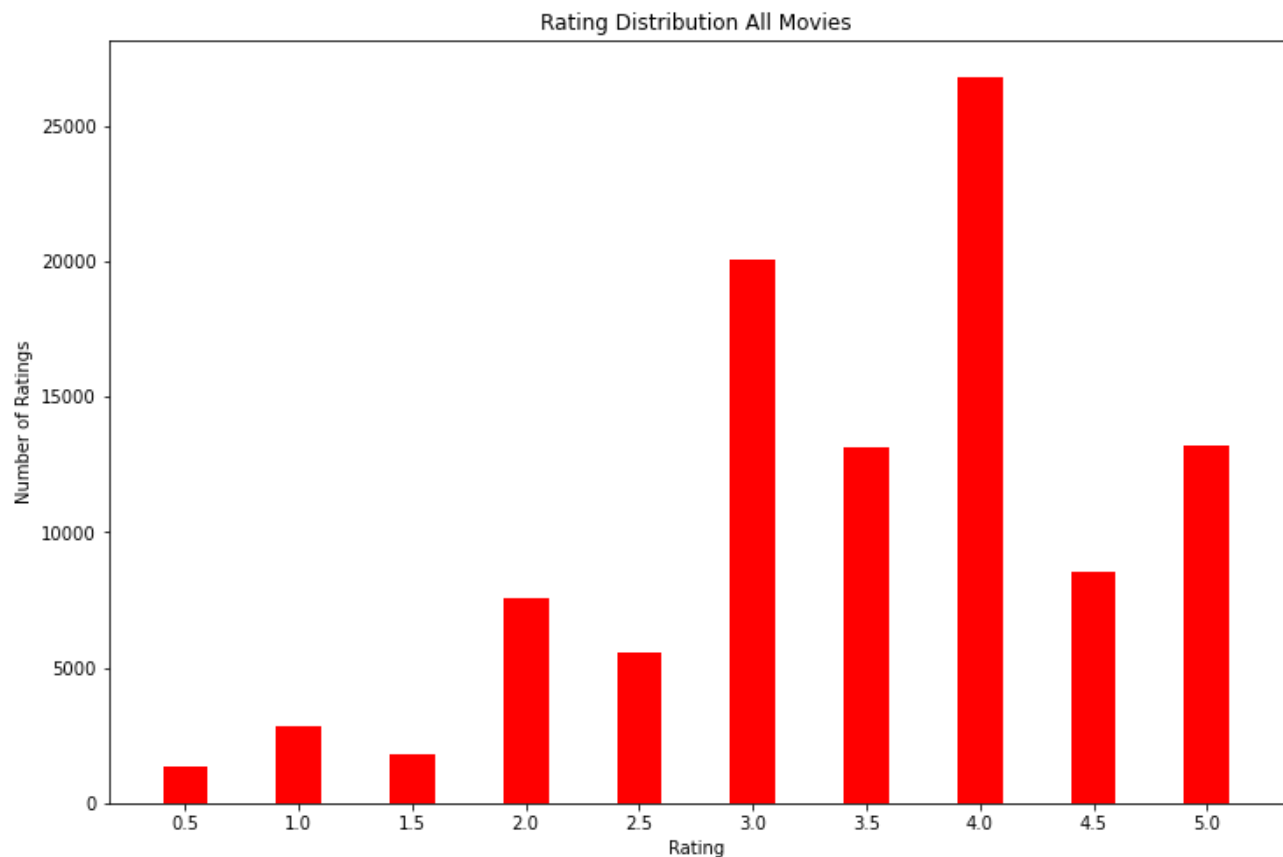
Data Used

data from MovieLens can be found in the 'data' folder

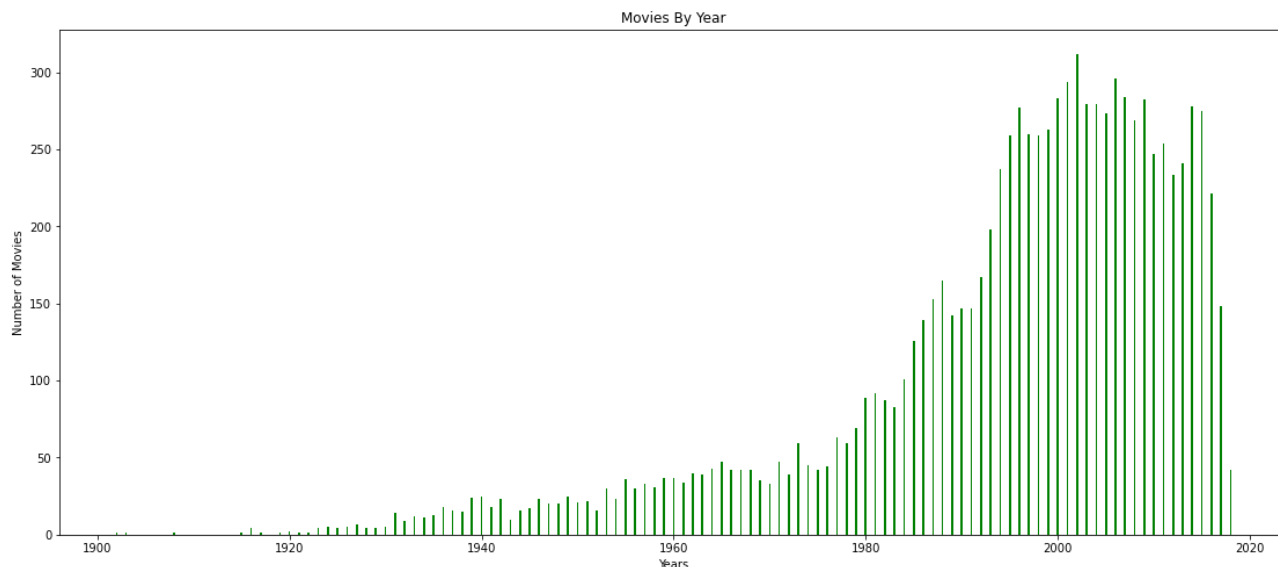
- movies.csv
- ratings.csv
- tags.csv
- links.csv

movies.csv and ratings.csv were used to create the model and make predictions

Movie rating distribution can be seen below.



Movies used by year



Final Model

The final model was a Singular Value Decomposition(SVD) with hyper-tuned parameters using surprise library.

Model Evaluation

the metric used to evaluate the models was root-mean-square error (RMSE). Our best model had an RMSE of about .860.

Sample Predictions

Movie predictions from model. The top 5 rated movies.

STANDARD RECOMENDATIONS

Title: Billabong Odyssey (2003)

Genre: Documentary

Projected Rating: 4.5

Title: How the Grinch Stole Christmas! (1966)

Genre: Animation|Comedy|Fantasy|Musical

Projected Rating: 4.5

Title: My Best Friend's Wedding (1997)

Genre: Comedy|Romance

Projected Rating: 4.5

Title: I Love Trouble (1994)

Genre: Action|Comedy

Projected Rating: 4.5

Title: Marat/Sade (1966)

Genre: Drama|Musical

Projected Rating: 4.4

Filtered movie predictions. The top 5 rated movies after results have been filtered by user survey.

YOUR CUSTOMIZED RECCOMENDATIONS

Title: Education, An (2009)

Genre: Drama|Romance

Projected Rating: 4.2

Title: Despicable Me (2010)

Genre: Animation|Children|Comedy|Crime

Projected Rating: 4.2

Title: White Ribbon, The (Das weiße Band) (2009)

Genre: Drama|Mystery

Projected Rating: 4.2

Title: Pirate Radio (2009)

Genre: Comedy|Drama

Projected Rating: 4.2

Title: Gamer (2009)

Genre: Action|Sci-Fi|Thriller

Projected Rating: 4.2

Limitations

Our model will only be as good as our data. We should anticipate and expect improved metrics as our data increases.

Recommendations and Next Steps

- Develop plan to encourage users to rate more movies.
- Create new models using user login demographics.
- Use Natural Language Processing(NLP) on movie scripts to gain more insight on our users preferences.

Conclusion

After a thorough iterative modeling process, we determined that the hypertuned svd model would be the best selection at this point. Recommendations would be made for the new trial users based on their initial recommendation and the optional survey that limits the years of release and the genres of the recommendations.

Deliverables

- [Non-Technical Presentation](#)
- [GitHub Repository](#)
- [Jupyter Notebook](#)

Releases

No releases published

[Create a new release](#)

Packages

No packages published

[Publish your first package](#)

Languages

● **Jupyter Notebook** 100.0%