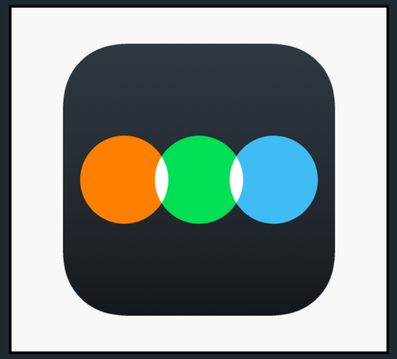


Letterboxd Analysis

Recommendation System, Capstone Project

Sierra Stanton, 09/2021

WHAT WE DID

We analyzed film ratings from the top 4,500 users on “Goodreads for Films” app Letterboxd and created a recommendation system that predicts which films users will most enjoy.

OUTLINE

- Our Problem
- Data Analyzed
- Methodology
- Results
- Conclusions and Next Steps
- Appendix

OUR PROBLEM

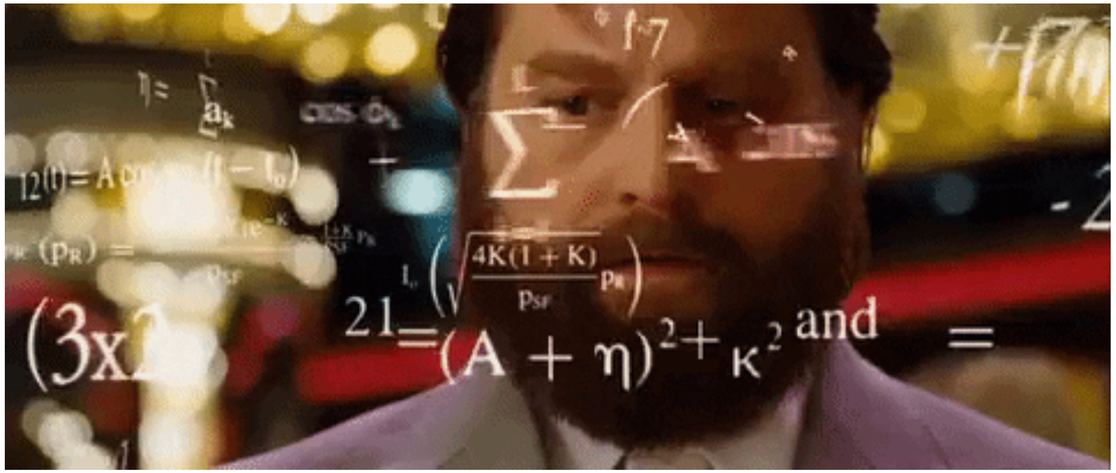
Movie watchers have an extensive amount of film choices available to them and need better help interpreting the signal from the noise.

DATA ANALYZED

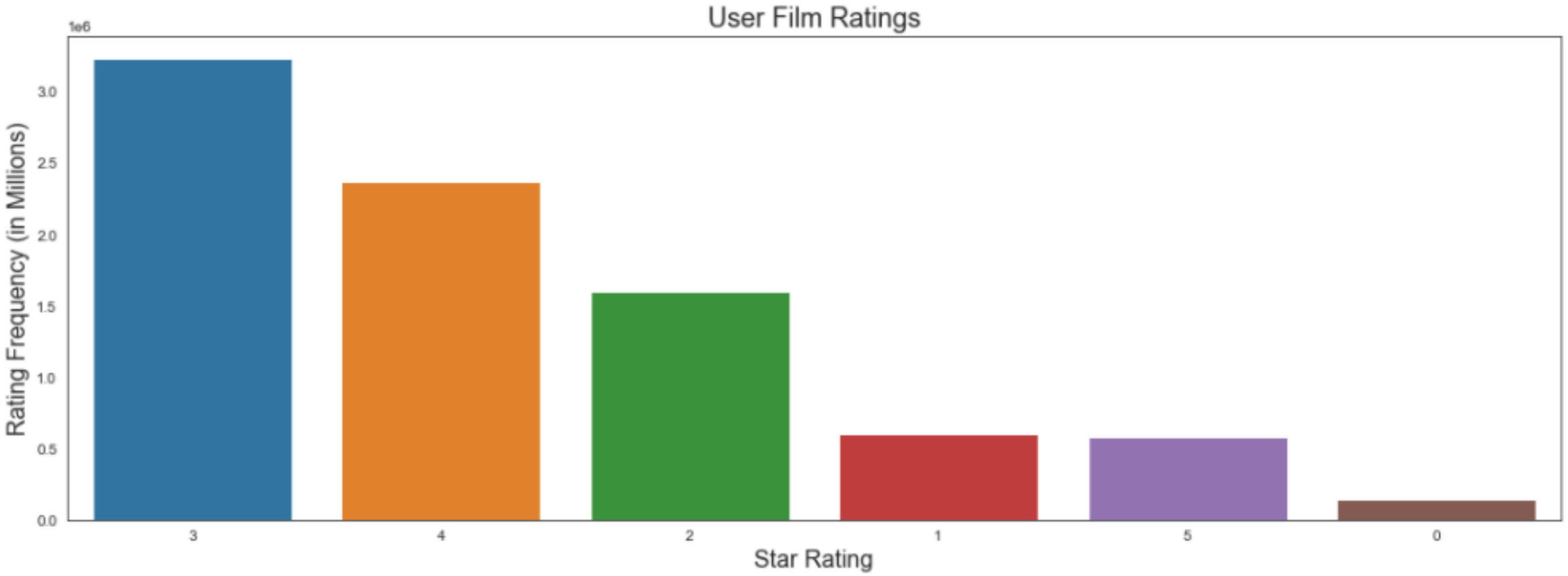
	🎬 **A. Movie Info**	⭐ **B. Ratings**	🎬 + ⭐ **A + B Merged Model-Ready Data**
Description	Each film's unique ID, title, and year of release	Letterboxd's top users and their associated film ratings	Letterboxd's top users and their associated film ratings, with the associated film's unique ID
Quantity of Rows	250K records	8 million records	8 million records

METHODOLOGY

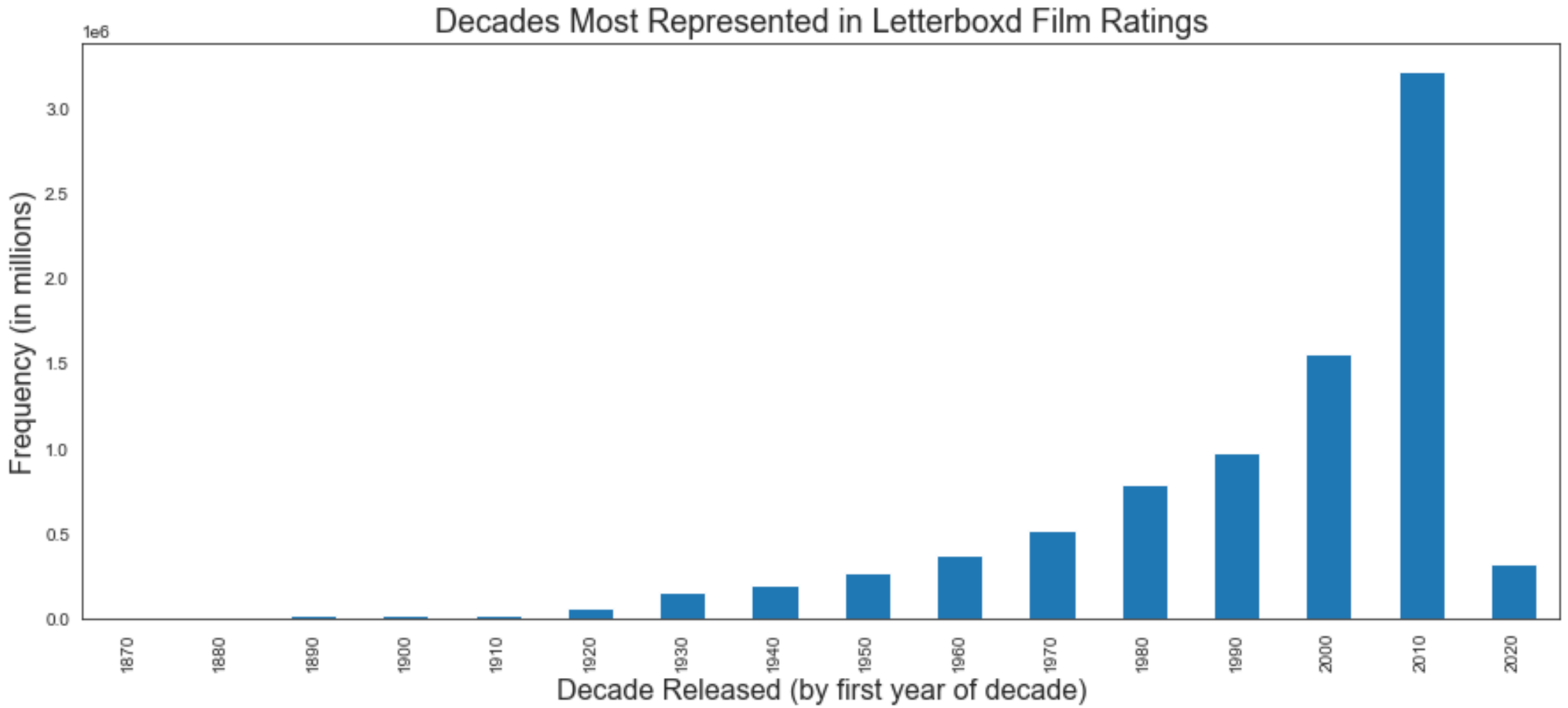
We'll use descriptive analysis and recommendation modeling to find with increasing accuracy which films movie watchers are most likely to enjoy.



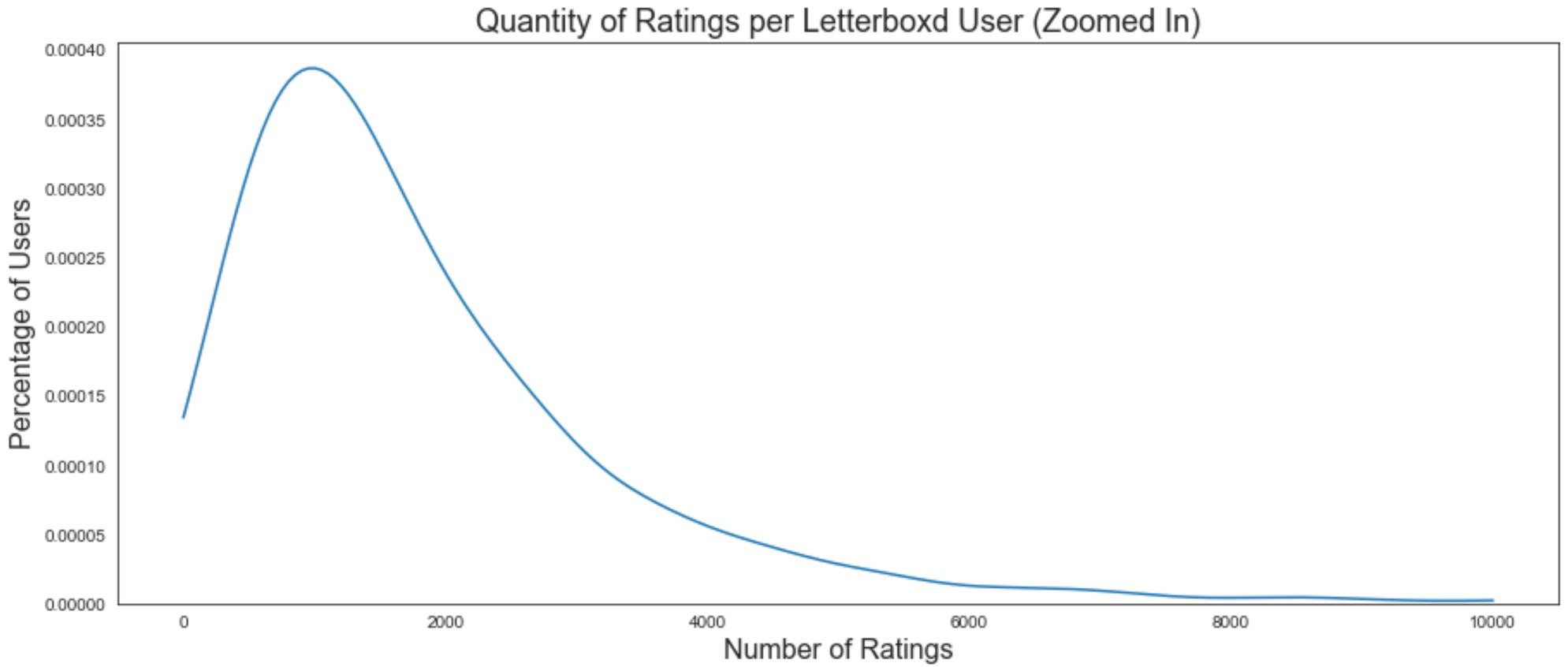
RESULTS


User Film Ratings
1e6
3.0
2.5
2.0
1.5
1.0
0.5
0.0
Rating Frequency (in Millions)
3
4
2
1
5
0
Star Rating

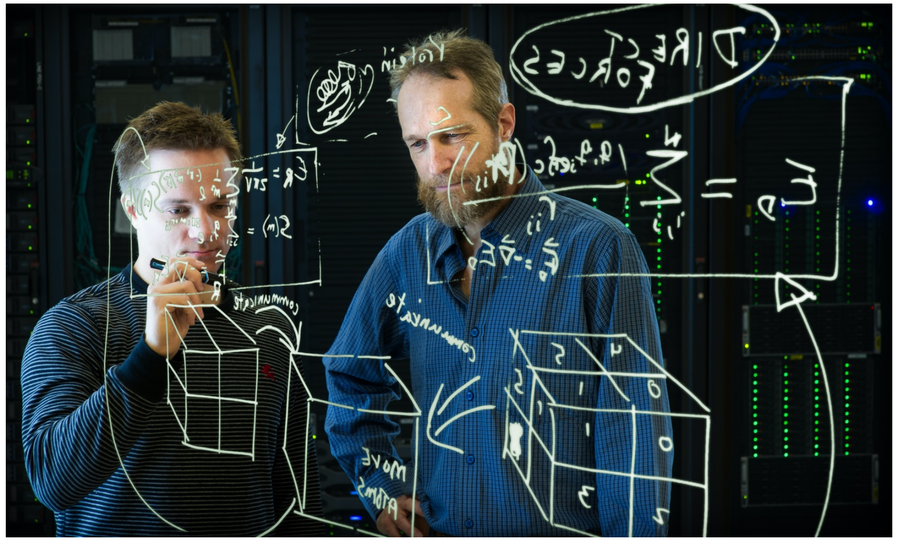
RESULTS


Decades Most Represented in Letterboxd Film Ratings
1e6
3.0
2.5
2.0
1.5
1.0
0.5
0.0
Frequency (in millions)
1870
1880
1890
1900
1910
1920
1930
1940
1950
1960
1970
1980
1990
2000
2010
2020
Decade Released (by first year of decade)

RESULTS

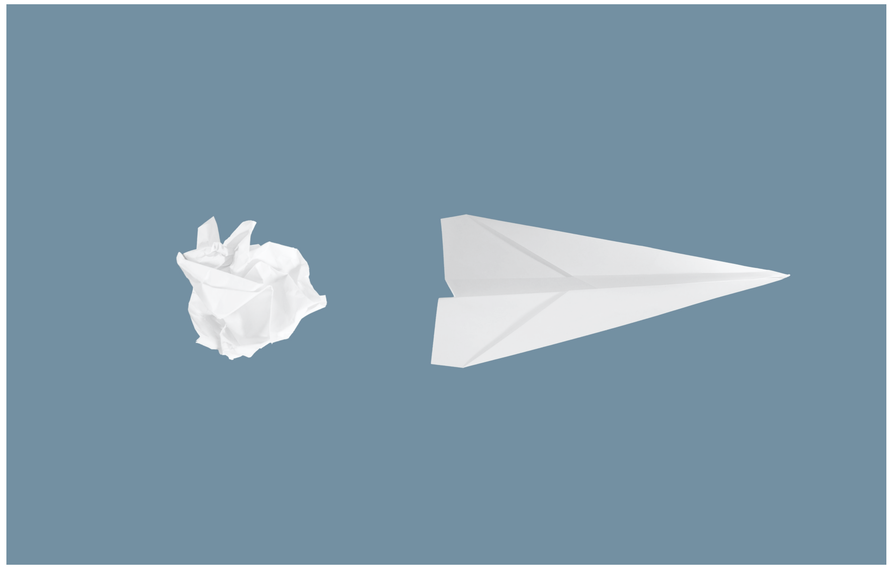

Quantity of Ratings per Letterboxd User (Zoomed In)
Percentage of Users
0.00040
0.00035
0.00030
0.00025
0.00020
0.00015
0.00010
0.00005
0.00000
0
2000
4000
6000
8000
10000
Number of Ratings

RESULTS



We are now able to predict within about half a star how a movie watcher would rate a film and can recommend films accordingly.

CONCLUSIONS & NEXT STEPS



Our final, iterated SVD model runs in about twenty minutes currently and has prediction accuracy within half a star of how a Letterboxd user tends to rate a film. Next, we'll want to create the front-end experience for a Letterboxd user to source these helpful recommendations.