

Love Story of Netflix and IMDB

Deep Learning based approach to Hybrid Recommendation Engine

Beating the Netflix Grand Prize Winners:

Bellkor in 2009 achieved an RMSE of 0.8567 using a purely collaborative approach.

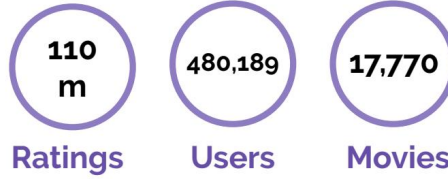
Challenges:

- Combining Content Based and Collaborative Filtering
- Combination of categorical and continuous variables
- Combining two databases with imperfect matches

Major Accomplishments:

- Merging complementary datasets
- Compressed representation of movies and users
- 2.7% improvement of RMSE over Bellkor's RMSE

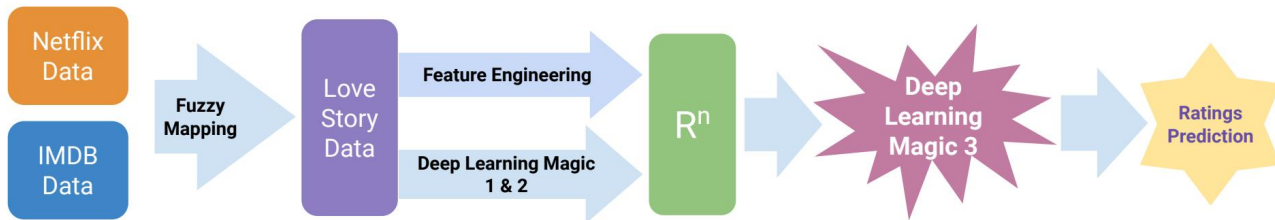
Netflix Dataset



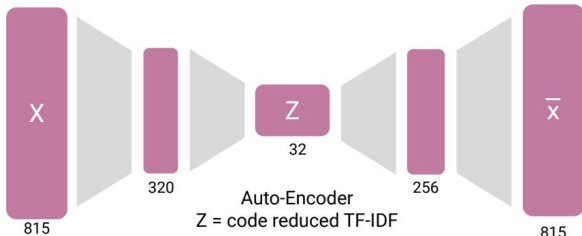
IMDB Dataset



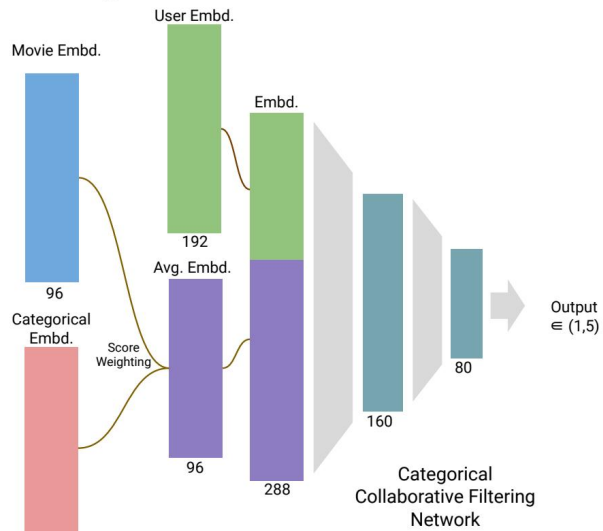
Flow



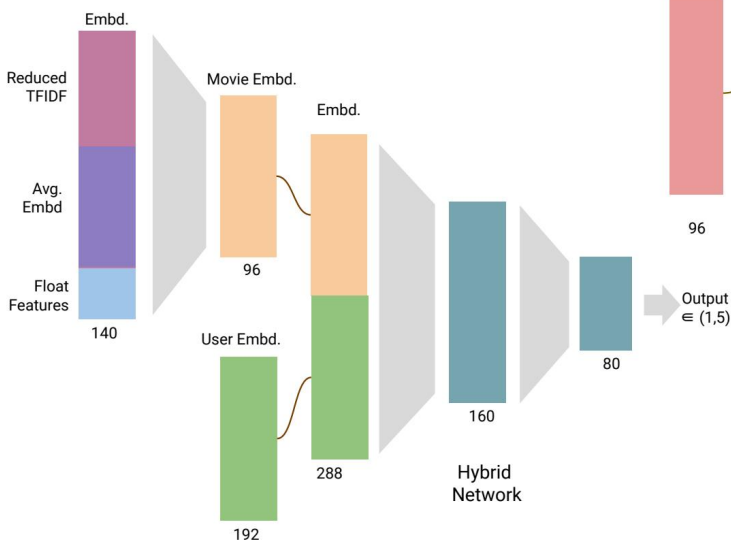
Magic 1



Magic 2



Magic 3



Results

Model	RMSE	% Improvement to Netflix Winners
Netflix Winners	0.8567	0%
Purely CF Net	0.8409	1.84%
Hybrid Net	0.8335	2.7%