Steam Recommendation System

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Business Problem

- Create a recommendation system for users to find more games they would like
- Continue to bring in profit during the off season
- User retention

Data Collection

- Retrieved from the University of California San Diego Recommender Systems Datasets
- 4 different datasets that included
  - reviews
  - purchases, plays, recommends ("likes")
  - product bundles
  - pricing information

Recommender features

- Dataset has over 80,000 different users and 32,00 different games cataloged
- The lack of a 1-5 review system led the project to see if the user owns the product or not
- Recommend what game the user should try based on the games they own
- Collaborative filtering

Modeling

- After running different parameters on the SVD matrix factorization model, the model was able to get an RMSE of 0.0012
- The SVD model utilised an n_factor of 20 and reg_all of 0.1

Prediction

- A new user is added and owns these 4 games:
  - Counter Strike: Global Offensive
  - Portal
  - Castle Crashers
  - Mirror's Edge

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Recommendation #  1 :  The ORPHEUS Ruse

Recommendation #  2 :  Mahjong Roadshow™

Recommendation #  3 :  Andromedum

Recommendation #  4 :  Driver Fusion Premium

Recommendation #  5 :  Awareness Rooms
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Next steps

- Create visualizations
- Create more models
- Display game image when predictions are made
- Create a front end

Citations:

Steam data:

Self-attentive sequential recommendation

Wang-Cheng Kang, Julian McAuley

ICDM, 2018

Item recommendation on monotonic behavior chains

Mengting Wan, Julian McAuley

RecSys, 2018

Generating and personalizing bundle recommendations on Steam

Apurva Pathak, Kshitiz Gupta, Julian McAuley

SIGIR, 2017

Steam logo:

https://freebiesupply.com/logos/steam-logo/