Netflix movie & show recommendation dashboard

CPSC 547

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The "WHY"

1. Netflix can see what we watch but it is blind to what we don't watch and hence keeps recommending the shows we are not interested in
   - As a result, it has a limited recommendation list

2. Based on online discussions (e.g. Reddit, blog posts), users are questioning how the algorithms work

The "WHAT"

- 7000 latest TV Shows and Movies currently on Netflix – obtained from the IMDB website

- Attributes: metadata of Netflix TV Shows and Movies

- Multiple visualizations to explain the different algorithms (word cloud, 2D mapping, scatter chart, bar chart...)

- imdb_id : Unique show identifier.
- title : Title of the show.
- popular_rank : Ranking as given by IMDB when filtered by popularity.
- certificate : Contains the age certifications received by the show. Many null values.
- startYear : When the show was first broadcasted.
- endYear : Year of show ending
- episodes : Number of episodes in the show. 1 for movies.
- type : Movie or Series
- orign_country : Country of origin of the show
- language : Language of the show.
- plot : Synopsis of the show.
- summary : Summary of the story of the show.
- rating : Average rating given to the show.
- numVotes : Number of votes received by the show.
- genres : Genre the show belongs to.
- isAdult : 1 If adult content present. 0 if not.
- cast : Main cast of the show in list format.
- image_url : Link to poster image.
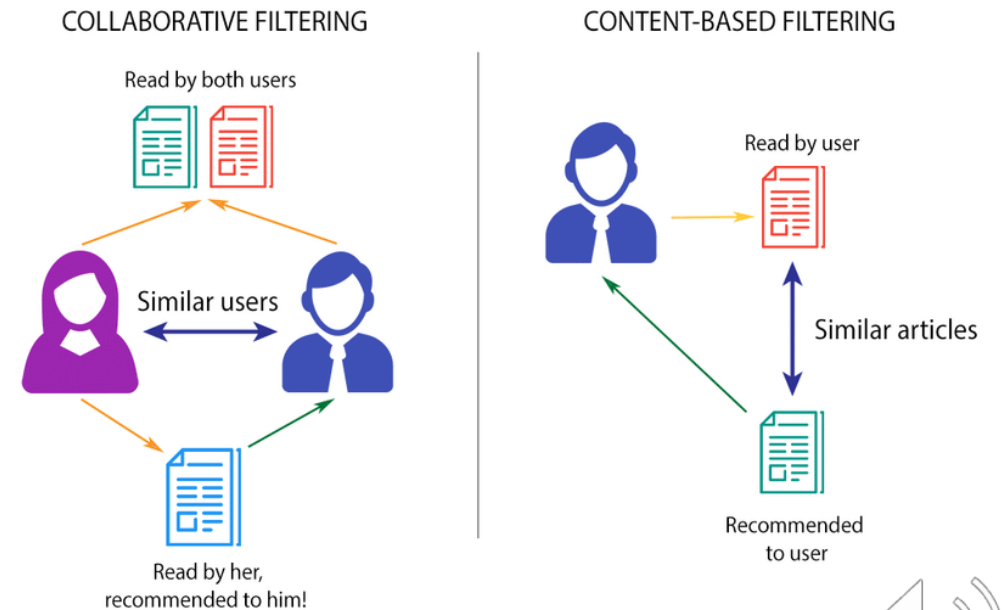
The "WHAT" – example visualization
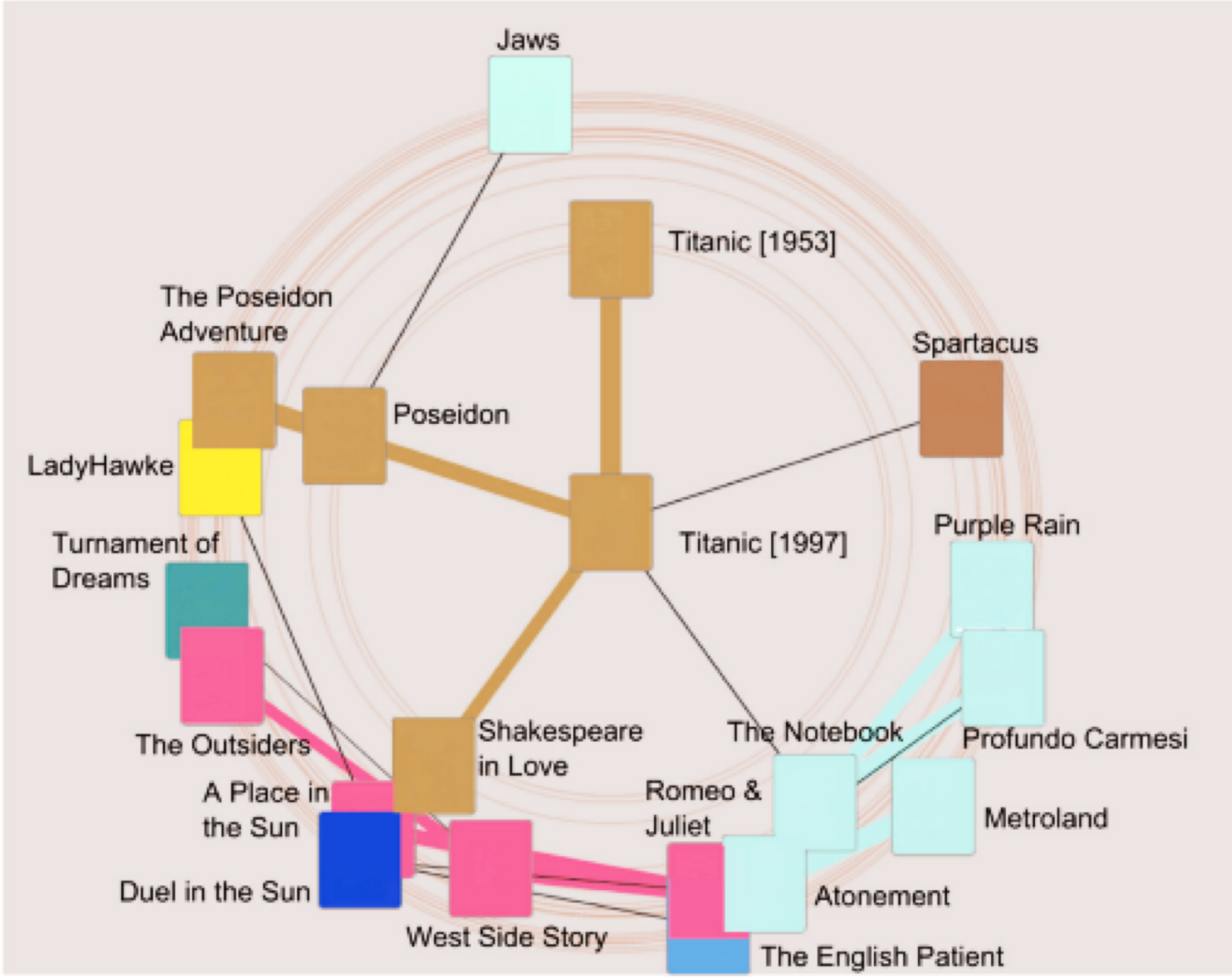
The "HOW"

- Python analysis and a user-friendly interactive Tableau dashboard published as a webpage

- Providing rankings of top 20 suggested titles based on multiple criteria selected by the user and the three most common algorithms used

Demographic Filtering – recommends the same movies to users with similar demographic features (based on movie popularity and/or genre)

Content Based Filtering – suggests similar items based on a particular item, uses item metadata, such as genre, director, description, actors, etc.

Collaborative Filtering – matches people with similar interests and provides recommendations based on this matching

COLLABORATIVE FILTERING

Read by both users

Similar users

Read by her, recommended to him!

CONTENT-BASED FILTERING

Read by user

Similar articles

Recommended to user

Thank you!

- Vlachos, M., & Svonava, D. (2013). Recommendation and visualization of similar movies using minimum spanning dendrograms. Information Visualization, 12(1), 85-101.

- Pazzani, M. J. (1999). A framework for collaborative, content-based and demographic filtering. Artificial intelligence review, 13(5), 393-408.