Part1:

The website that I analyzed is eBay.

- A screenshot of the recommender

- o Display a menu for "https://www.ebay.com/itm/Star-Wars-Battlefront-II-PlayStation-4/123551159922?_trkparms=pageci%3A92b0a376-e8cd-11e9-8ba4-74dbd180da20%7Cparentrq%3Aa4f4198416d0aa66959b80befff6f5b1%7Ciid%3A1"
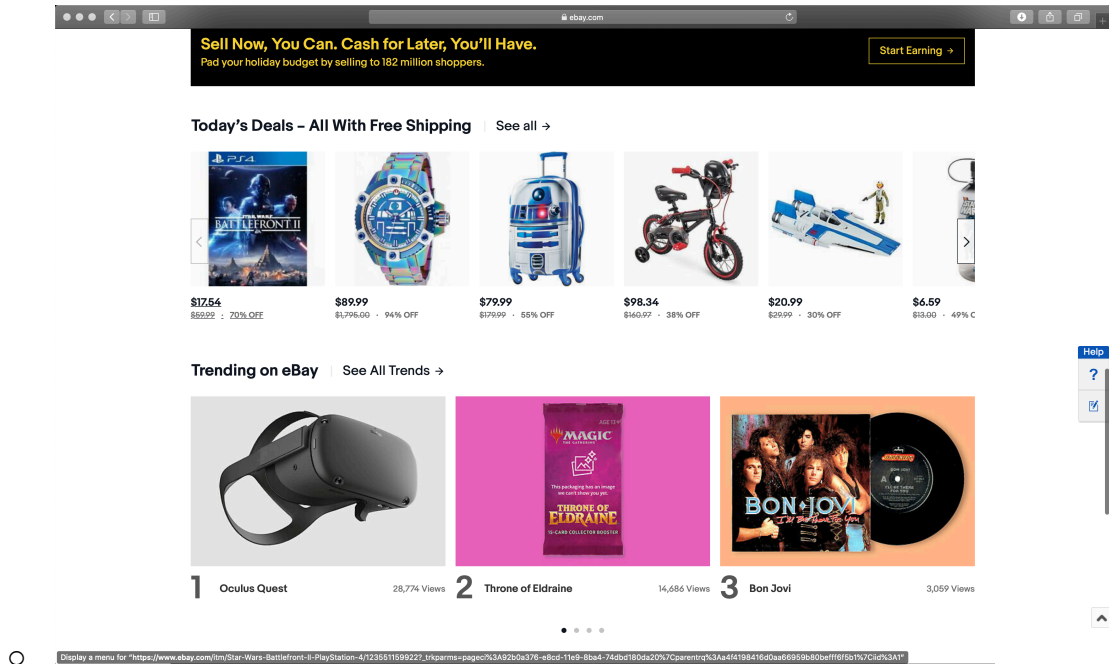
- Categories

   o Domain: product

   o Purpose: sale the product

   o Recommendation Context: the Browser the customer uses to view eBay.

   o Whose Opinions: opinions of the masses

   o Personalization Level: Non-personalized

   o Recommendation Algorithms: For users who are not logged in, the recommender
     will push things based on best-seller, most popular and trending now.

   o Your assessment of the recommendation display: The advantage is that it can take
     care of new users. The disadvantage is that because of the lack of personalization,
     it is impossible to take care of all kinds of people.

- o Overall assessment of the recommender: I think this recommendation system is doing very well because he also recommended today's deal and recent trending. At the same time, recommending deal and trending can maximize the desire to purchase.

Part2:

- Mean Rating: 318: Shawshank Redemption, The (1994) 3.6, 260: Star Wars: Episode IV - A New Hope (1977) 3.27, 541: Blade Runner (1982) 3.22

- Rating Count: 1: Toy Story (1995) 17, 593: Silence of the Lambs, The (1991) 16, 260: Star Wars: Episode IV - A New Hope (1977) 15

- % of ratings 4+: 318: Shawshank Redemption, The (1994) 70%, 260: Star Wars: Episode IV - A New Hope (1977) 53.3%, 3578: Gladiator (2000) 50%

- Co-occurrence: 1: Toy Story (1995) 81.25% , 260: Star Wars: Episode IV - A New Hope (1977) 75%, 527: Schindler's List (1993) 68.75%

- Correlation: 2762: Sixth Sense, The (1999) 0.58, 527: Schindler's List (1993) 0.44, 1259: Stand by Me (1986) 0.396

- Mean rating difference:

    - o Men most: 296: Pulp Fiction (1994) 2.625rating 1.38different

    - o Women most: 34: Babe (1995) 3.43rating 1.43different

    - o Smallest different: 318: Shawshank Redemption, The (1994) mean rating 3.6, different 0.4

- Rating 4+

    - o Women: 34: Babe (1995)

- Men: 1198: Raiders of the Lost Ark (1981)

Part4:

How many user/movie predictions (of the 241 for which we have ratings) match the ratings on like/dislike (i.e., if the user rated below 3, the model gives a negative score, and vice versa)?

- 293match,107 not match

Which two movies does the model predict that user 5347 will dislike the most?

- Dislike

    - 1: Toy Story (1995)

    - 527: Schindler's List(1993)

Which two people does the model predict will like Movie 34(Babe) the most?

- 4117

- 1940 (5450)

- After re-weighting

How many user/movie predictions (of the 241 for which we have ratings) match the ratings on like/dislike (i.e., if the user rated below 3, the model gives a negative score, and vice versa)?

- 293match,107not match

Which two movies does the model predict that user 5347 will dislike the most?

- Dislike

    - 1: Toy Story (1995)

    - 527: Schindler's List(1993)

Which two people does the model predict will like Movie 34(Babe) the most?

- 4117

- 1940 (5450)

Part 6

For this part I chose domain4 - Dating partners for an online dating site. I think content-based filtering can be applied to this domain. For content-based filtering, each item is represented as a set of descriptions or terms. In this domain, we can ask the user to choose the tag that suits them when the user registers. These tags are composed of different genres. In this way, each user will have his own description when registering. In addition to these manually assigned tags, the system also sets other tags based on the basic data for different people. For example, according to the ratio of height to weight, the figure is calculated whether the person's body is thin or too fat, whether the height is high or short, etc. We can recommend users like pop-up cards. We can set up a special recommendation area on the site. In this area, other users are recommended based on the current user's tag. The current user can choose to like or dislike, this method can continuously improve the algorithm and update the user's profile. When the current user clicks like, another user will be notified. For every user, the user will have three user profiles, the first profile is based on his own description, the second profile is based on his own description and feedback from others, and the third profile is based on his likes. type. When a user is liked or dislikes, the second description file will be updated. In this way, even if the user is biased based on the profile described by the user, it can be corrected with the evaluation of others. The type that everyone likes will not change drastically in a short period of time, so this recommendation system does not need to try the user's future interests. The recommendation

system only needs to keep updating the second and third configuration documents. And according to the user's third configuration file to match the first and second configuration files of other users.