(Notice: Tasks here are only for reference, please use your creativity to find your own problems.)

Examples: Amazon

We adopt a dataset from Amazon which includes product reviews and metadata for 142.8 million reviews from May. 1996 to July, 2014 (http://jmcauley.ucsd.edu/data/amazon/). Please use the small dataset Movies and TV [5-core (1,697,533 reviews)]. The website above contains codes for reading in files and basic information for this dataset as follows:

file name: Movies_and_TV_5.json

reviewerID - ID of the reviewer, e.g. A2SUAM1J3GNN3B *asin* - ID of the product, e.g. 0000013714

reviewerName - name of the reviewer

helpful - helpfulness rating of the review, e.g. 2/3 *reviewText* - text of the review

overall - rating of the product (1-5)

summary - summary of the review

unixReviewTime - time of the review (unix time) *reviewTime* - time of the review (raw)

Task 1: sentiment analysis

- **You need to use the review to the product to classify the user's feeling (positive/negative) for this product**

- You can use the pre-trained word and phrase embedding vectors

- You can refer to [1-1] for the detail about sentence classification

Task 2: product rating

- **Use review and score of the user to predict the rating of the product that the user hasn't bought**

- In this work, you can refer to [1-2] and [1-3] for more details about product rating

Task 3: product recommendation

- **Use items that a user has bought to predict what the user will buy and generate a product recommendation list for the user**

- [1-4] and [1-5] are papers about recommendation, you can use different models to generate recommendation list

Reference papers

- **[1-1]** Yoon Kim (2014). Convolutional Neural Networks for Sentence Classification.
- **[1-2]** Lei Zheng, Vahid Noroozi & Philip S. Yu (2017). Joint Deep Modeling of Users and Items Using Reviews for Recommendation.
- **[1-3]** Rose Catherinen & William Cohen (2017). TransNets: Learning to Transform   for Recommendation
- **[1-4]** Shumpei Okura, Yukihiro Tagami, Shingo Ono & Akira Tajima (2017).   Embedding-based News Recommendation for Millions of Users.
- **[1-5]** Badrul Sarwar, George Karypis, Joseph Konstan & John Riedl (2001).   Item-Based Collaborative Filtering Recommendation Algorithms.