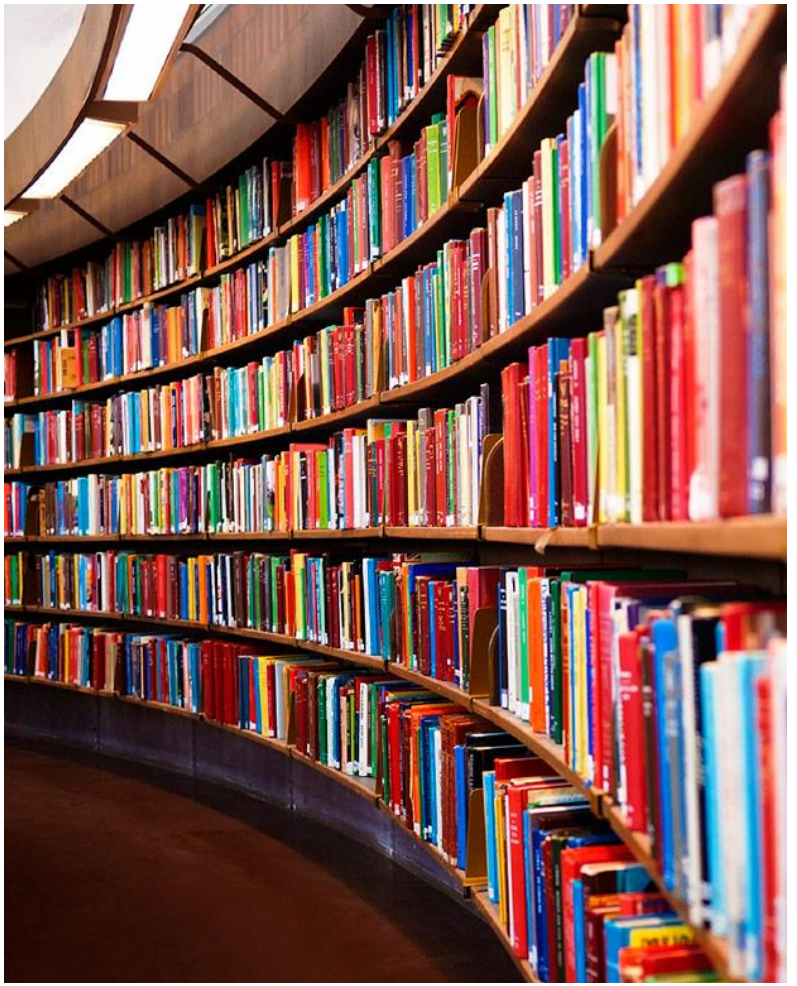
KINDLE STORE: USER PROFILING & BOOK RECOMMENDATIONS

MOTIVATION – FIND BETTER BOOKS!

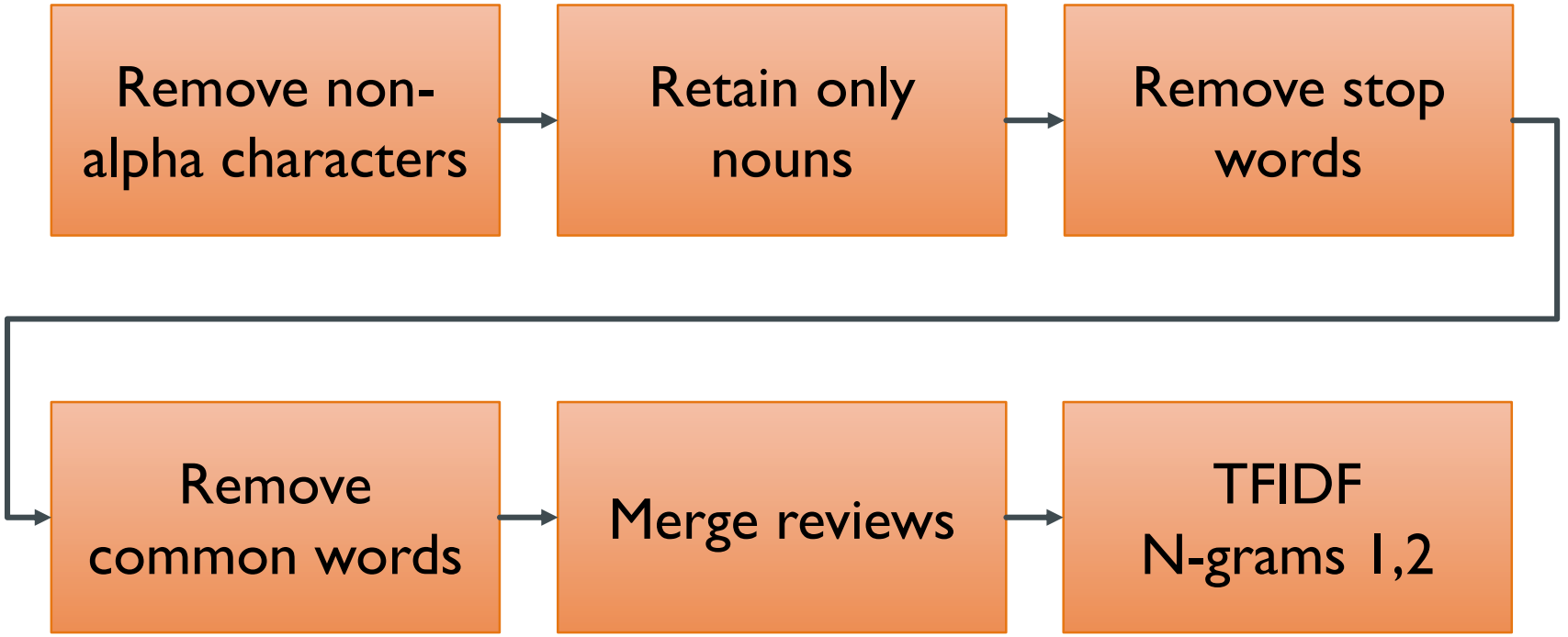
- E-books sold in 2016 – 485M
- Use Kindle book reviews to group customers
- Create a recommendation system



DATASET

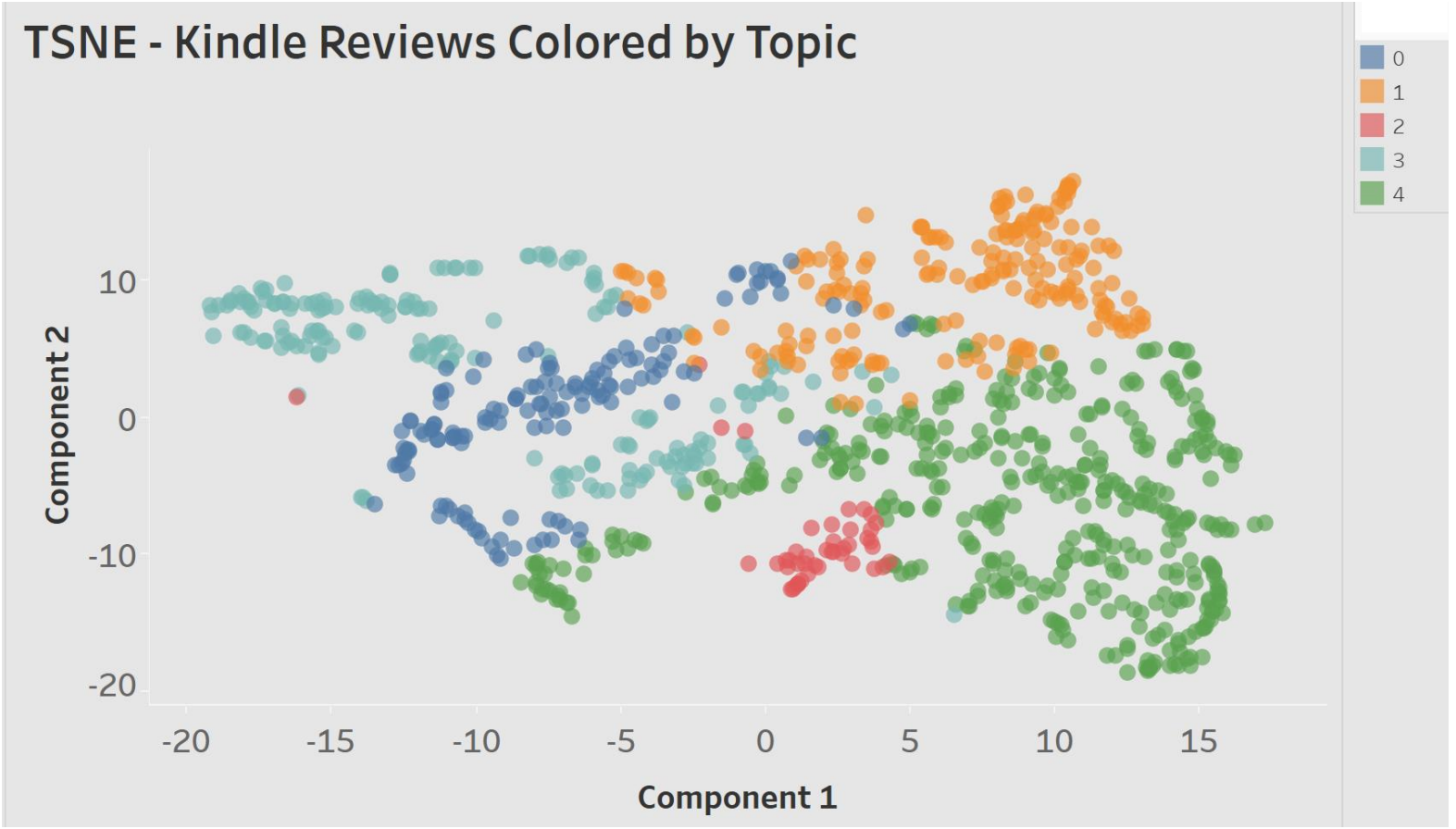
- Provided by UCSD
- Includes reviews, ratings, and product metadata for kindle: 2007-2013
- Subset of data taken:
  - 1000 users with 11-14 reviews (inclusive)

TEXT PROCESSING



TOPIC MODELING

- NMF produced best result
- Separated data into 5 topics
- Followed by TSNE – for visualization



User Types	Description	Occurrences
Romance [0]	Romance, Sex, Relationship	143
Action and Adventure [1]	Action, Fun, Mystery	196
Science Fiction [2]	Science Fiction, Collection, Zombie	45
Character Development [3]	Character, Development, Plot	188
Non-Fiction [4]	Time, People, World	428

RECOMMENDATION SYSTEM

- Collaborative item-item recommendation method
- SVD to extract latent variables from user-item matrix
- Returned 6 recommendations for each user
- Very highly skewed towards popular books

User's Choice:

Recommendation:

LIMITATIONS AND FUTURE WORK

- Limited by local machine
- Larger portion of dataset should be run and models re-tested
- Recommendation system could be improved with implicit and proprietary data from Amazon

Dataset citation: Ups and downs: Modeling the visual evolution of fashion trends with one-class collaborative filtering R. He, J. McAuley WWW, 2016