

Women's News Application with a Hybrid Recommendation System

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Overview: While more and more news providers are recognizing the importance of news relating specifically to women, some still lack clear sections on their main pages dedicated to this kind of content. This oversight usually makes it difficult to search for articles that deal with women's issues such as reproductive rights, economic justice, and ending violence against women. While article-based news organizations are taking steps to cordon off sections specific to women, there is still a long way to go. Oftentimes these sections are not presented clearly on the main webpage forcing users to search to be able to find it. Once located, there is usually no way for a user to filter the content or find articles relevant to their specific interests. One such example of this is the New York Times (NYT). Since the NYT is a major news source that has a slightly liberal bias, especially when reporting issues pertaining to women such as abortion, it is logical that women would want to turn to the NYT for news. But due to the structure of their website, that is not the easiest thing to do. The proposed application would aggregate all NYT articles relevant to women and use a hybrid recommendation system to push articles of the most interest to a user to the top of their news feed, making it easier for women to find the articles they want.

The proposed project would take advantage of the NYT's application program interface to retrieve news stories related to women's issues from their large archive that dates back to 1851. When a user downloads the application, they will be prompted to provide certain information about themselves such as age, gender, location, and interests. Then, a hybrid recommendation algorithm combining content-based filtering and demographic recommendations will analyze what they read and what others that are similar to them read to provide a number of suggested stories that will be placed at the top of their news feed. This hybrid method will be used over content-based filtering alone because combining it with demographic recommendations solves the cold-start problem of what to recommend to new users if there has been no data collected on what they read yet.

Intellectual Merit: Hybrid recommendation systems can combine any number of different techniques such as collaborative filtering, demographic recommendations, content-based filtering, and knowledge-based recommendations. This flexibility provides a lot freedom in designing an algorithm that works best for a specific problem. This project will contribute to the field of hybrid recommendation systems by proposing a new algorithm that combines content-based filtering and demographic recommendations, which will hopefully assist other researchers or computer scientists in improving the accuracy and precision of these systems.

Broader Impacts: The resulting application can be used by a wide variety of people who have an interest in women's issues, such as social activists and feminists. Most prominently, it can help liberals find like-minded news because the NYT has historically been liberal leaning on certain women's issues. Since the application aggregates news stories specifically related to women, it could also prove to be particularly helpful for students taking women's studies courses so they can easily keep up to date with the news. Additionally, with the recommendation feature it can assist those who do not feel like sifting through a bunch of irrelevant articles to find what truly interests them within the realm of women's issues.