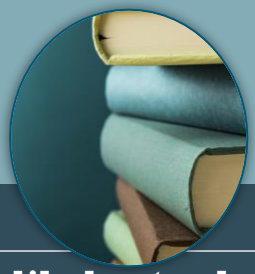
Gender Bias in Book Recommendations



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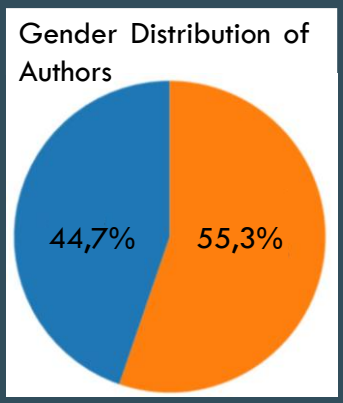
Research Question: Are books written by men more likely to be recommended in 'filtering systems' compared to books written by women?

Our Motivations: Many people rely on filtered recommendations to select books. Are these filtering systems as objective as they seem? This project tests this question and aims to raise awarenes of a potential bias within these systems.

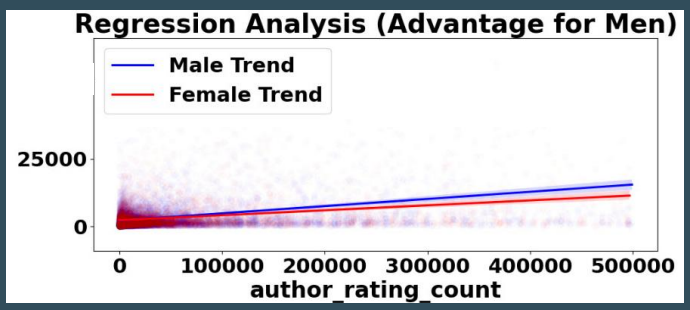
Limitations

This study uses a fixed data set and a computed recommendation score that is not transparent. This limits the understanding of customized recommendation behaviour. An author's gender is considered binary due to data limitations. The 10% highest rated books serve as a substitute for recommendations rather than a direct observation.

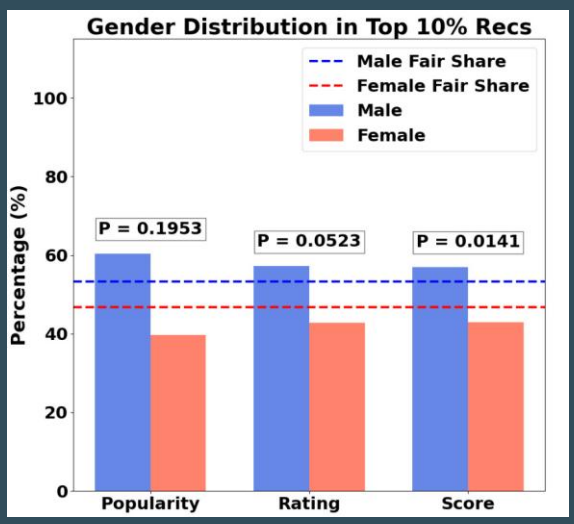


Data

The data set is from Kaggle and holds Goodreads data of 16.350 books. The books were published between 1678 and 2019. The attributes "book_average_rating", "author_gender" and "score" were vital for the study.

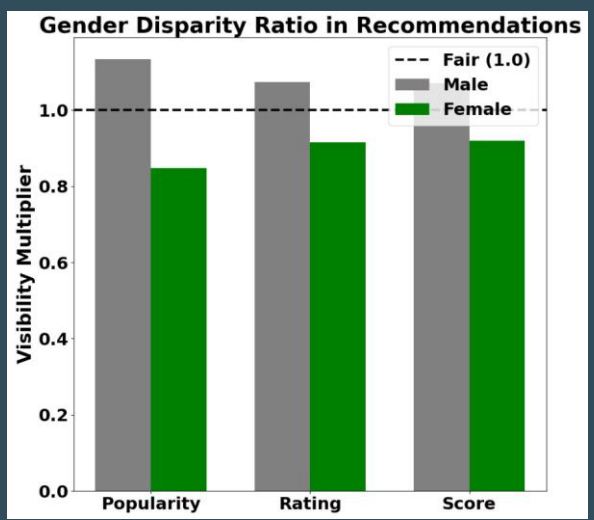


Results



Methods

By utilising OLS Regression and using popularity, rating and score as control variables, gender bias on recommendation scores were isolated and measured. Additionally, statistical analysis was used to work on the data set.



Conclusion

Overall, books by male authors seem to be over-represented in the data set. While the data set is partially imbalanced, further examination indicates recommendation systems tend to reinforce a gender bias. This suggests that even neutral filter systems may promote male authors' books over womens'.

*this list is in alphabetical order