

Introduction:

As an aspiring data analyst, I embarked on an exploratory data analysis project to delve into the dynamics of our library database. The aim was to extract actionable insights regarding book distribution, borrowing behavior, and member engagement.

Results Based on Books and Borrowing Behavior:

The most borrowed book, "The Worst Witch Strikes Again" by British author Jill Murphy, dominates our library's circulation, primarily categorised under the genre of "Children's fiction." Additionally, our analysis reveals the genre distribution among authors, with Roald Dahl leading across five genres. This insight underscores the need to diversify genre offerings among authors and expand our library collection. Children's fiction emerges as the most prevalent genre, with 27 titles, while J.K. Rowling stands out as the author with the highest book count at 10 titles.

The analysis further identifies March as the most popular renting month for both 2023 and 2024, likely attributed to World Book Day. January also registers high borrowing activity, possibly influenced by New Year's resolutions, including reading goals.

Findings/Results Based on Members:

Among our library members, Joshua Asante (member_id 200) emerges as the most prolific borrower, with 14 books borrowed, followed by James Miller with 10. Recognising their loyalty, we contemplate incentivising their continued engagement, perhaps through increased borrowing privileges or personalized book recommendations.

Of our 25 members, two hold inactive memberships, constituting 8% of our total membership base. While this figure is relatively low as we are a small library, targeted outreach strategies, such as offering membership discounts, could encourage reactivation and bolster member retention.

Conclusion:

In conclusion, our exploratory data analysis illuminates valuable insights into book distribution, borrowing patterns, and member engagement within our library. These findings serve as a foundation for informed decision-making, guiding efforts to optimise our collection, enhance member experiences, and sustain library vitality.