No One Ever Said “Don’t judge a book by its features”

By Kristina Barounis

1.
The Outline

Data Sources

New York Times API

- For books that were on any NYT best selling list between 2017 and the present

Web scraping Goodreads

- For books that were not on an NYT list
- For all features

Features & Observations

Scraped

- Title
- Author
- Rating
- Genre
- Publisher
- Publish date
- Number of pages

Engineered

- Series (Y/N)
- Top author (Y/N)
- Top 5 publishing company (Y/N)
- Month of publishing

Result

- Total of 37 columns in the dataset
  - Mostly categorical
  - 1 continuous: rating
- 1646 observations
  - 551 bestsellers
  - 1095 non-bestsellers

How important are the top 5 publishing companies?

Harper Collins

MACMILLAN

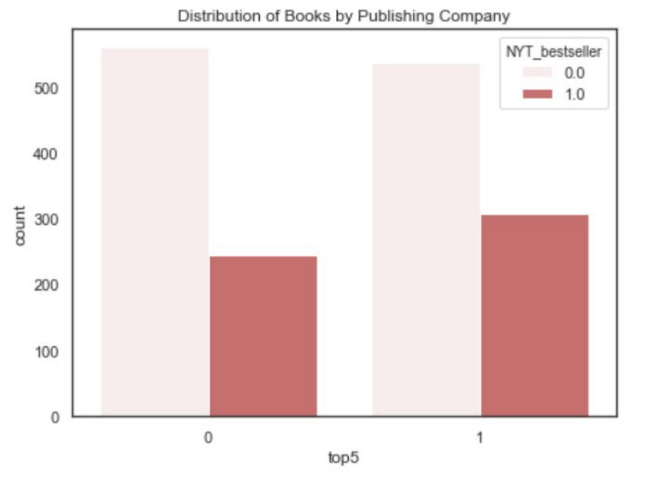
SIMON & SCHUSTER

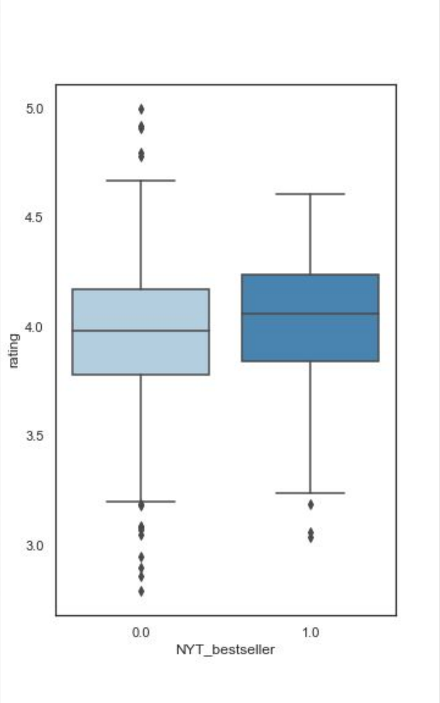
Penguin Random House

hachette LIVRE

Of the 551 bestselling books in the data set, 307 were published by the top 5 companies...

although the top 5 companies also account for a large portion of the non-bestsellers

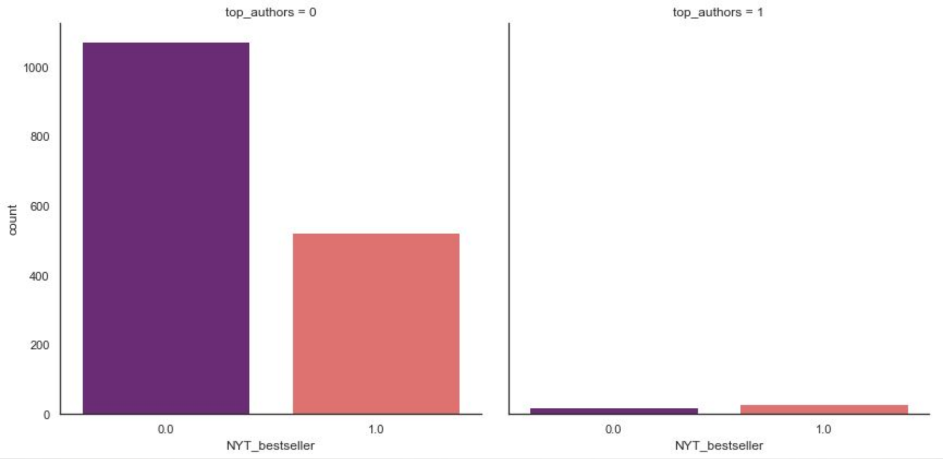


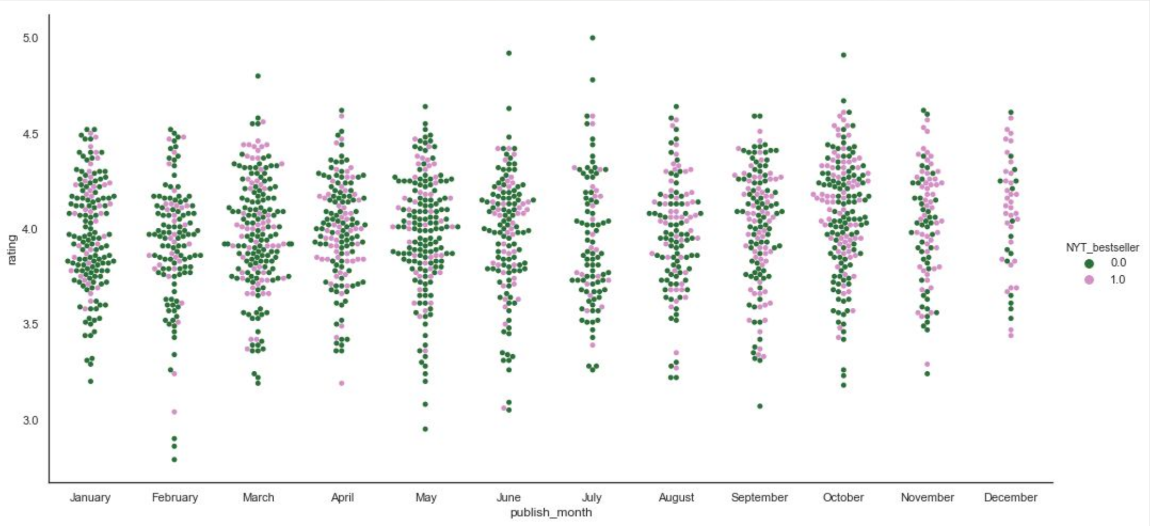


Average rating for bestsellers is slightly higher - but could this be due to the "NYT stamp of approval"?

Forbes highest earning authors 2017 and 2018:

- J. K. Rowling
- James Patterson
- Jeff Kinney
- Dan Brown
- Stephen King
- Nora Roberts
- John Grisham
- Paula Hawkins
- E.L. James
- Danielle Steel
- Rick Riordan
- Michael Wolff



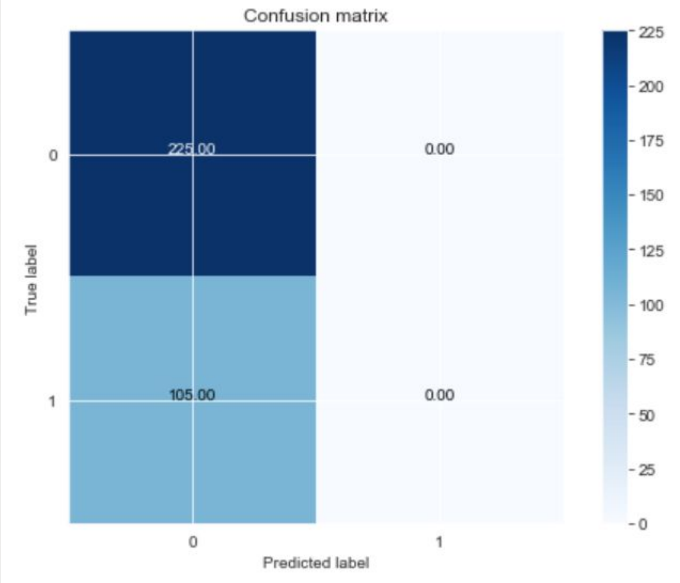


Fewer books are published in November and December and a larger proportion of the books published in those months are bestsellers when compared to other months

2.
The First Draft

Baseline Model: Dummy Classifier

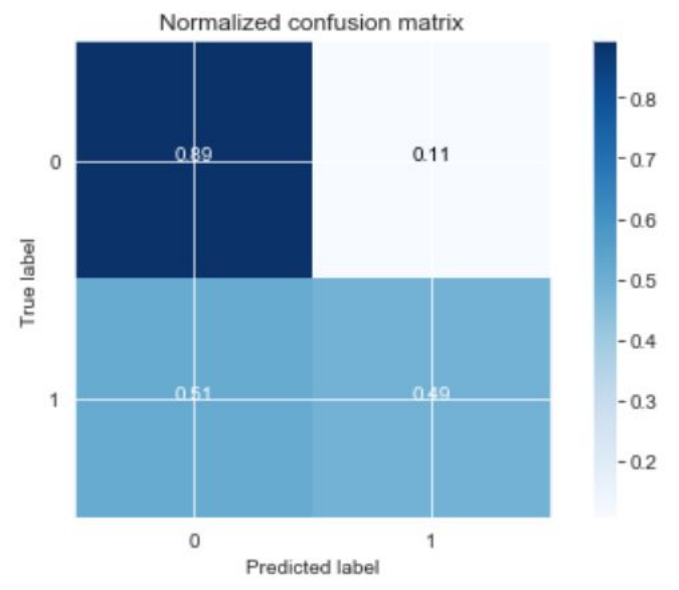
- 68% accuracy by picking the most frequent class, i.e. not a best seller



3.
The Final Draft

Final Model: Logistic Regression

- 75% accuracy
- Default hyperparameters turned out to be optimal
  - C: 1 (C=1/ƛ)
  - Penalty: L2 (Ridge)



The CliffNotes

Positive - higher likelihood	Negative - lower likelihood
Top authors	Horror
Politics	Science fiction
Publishing in December	Fantasy
Biographies	Short stories
Publishing in November	Fiction
Publishing with Penguin Random House	Young adult

Ready for publishing?!

- “The Institute” by Stephen King
  - Not a series
  - 4.36 rating
  - Top author
  - Published September
  - Not published by a top 5 company
  - Horror genre
- Model correctly classified!

- “Double Down: Game Change 2012” by Mark Halperin & John Heilemann
  - Part of a series
  - 3.87 rating
  - Not top authors
  - Published November
  - Published by Penguin
  - Politics genre
- Model incorrectly classified