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DEP: Intelligent Systems

Cloud computing

the results from the Popular Books Dataset analysis

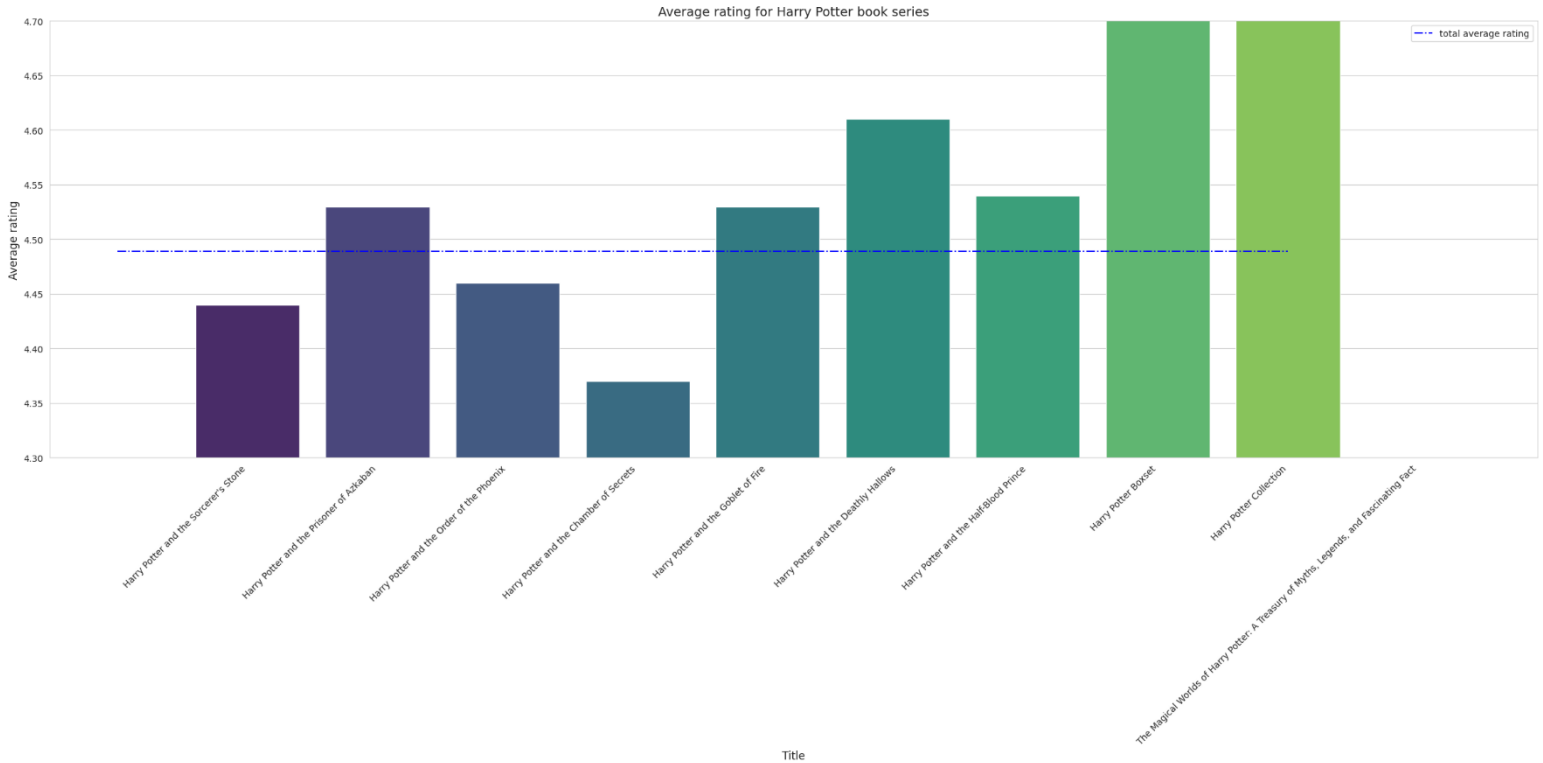
	ratings_1	ratings_2	ratings_3	ratings_4	ratings_5 \
count	10.000000	10.000000	10.000000	1.000000e+01	1.000000e+01
mean	12498.500000	26248.400000	145720.400000	4.084476e+05	1.033430e+06
std	22434.449023	29844.676198	136672.041798	3.459903e+05	8.778751e+05
min	203.000000	186.000000	946.000000	3.593000e+03	6.332000e+03
25%	2497.750000	6016.250000	33676.500000	1.189780e+05	3.893078e+05
50%	7012.000000	20964.500000	144059.000000	4.767275e+05	1.143148e+06
75%	9085.500000	29244.000000	176689.750000	5.058168e+05	1.248764e+06
max	75504.000000	101676.000000	455024.000000	1.156318e+06	3.011543e+06

	ratings_count	work_ratings_count	work_text_reviews_count \
count	1.000000e+01	1.000000e+01	10.000000
mean	1.535693e+06	1.626344e+06	29302.600000
std	1.338120e+06	1.399453e+06	23399.455664
min	1.382000e+04	1.514500e+04	267.000000
25%	5.622432e+05	5.995128e+05	11761.000000
50%	1.740971e+06	1.843972e+06	29884.500000
75%	1.772759e+06	1.896810e+06	35617.250000
max	4.602479e+06	4.800065e+06	75867.000000

	average_rating
count	10.000000
mean	4.491000
std	0.220829
min	3.960000
25%	4.445000
50%	4.530000
75%	4.592500
max	4.740000

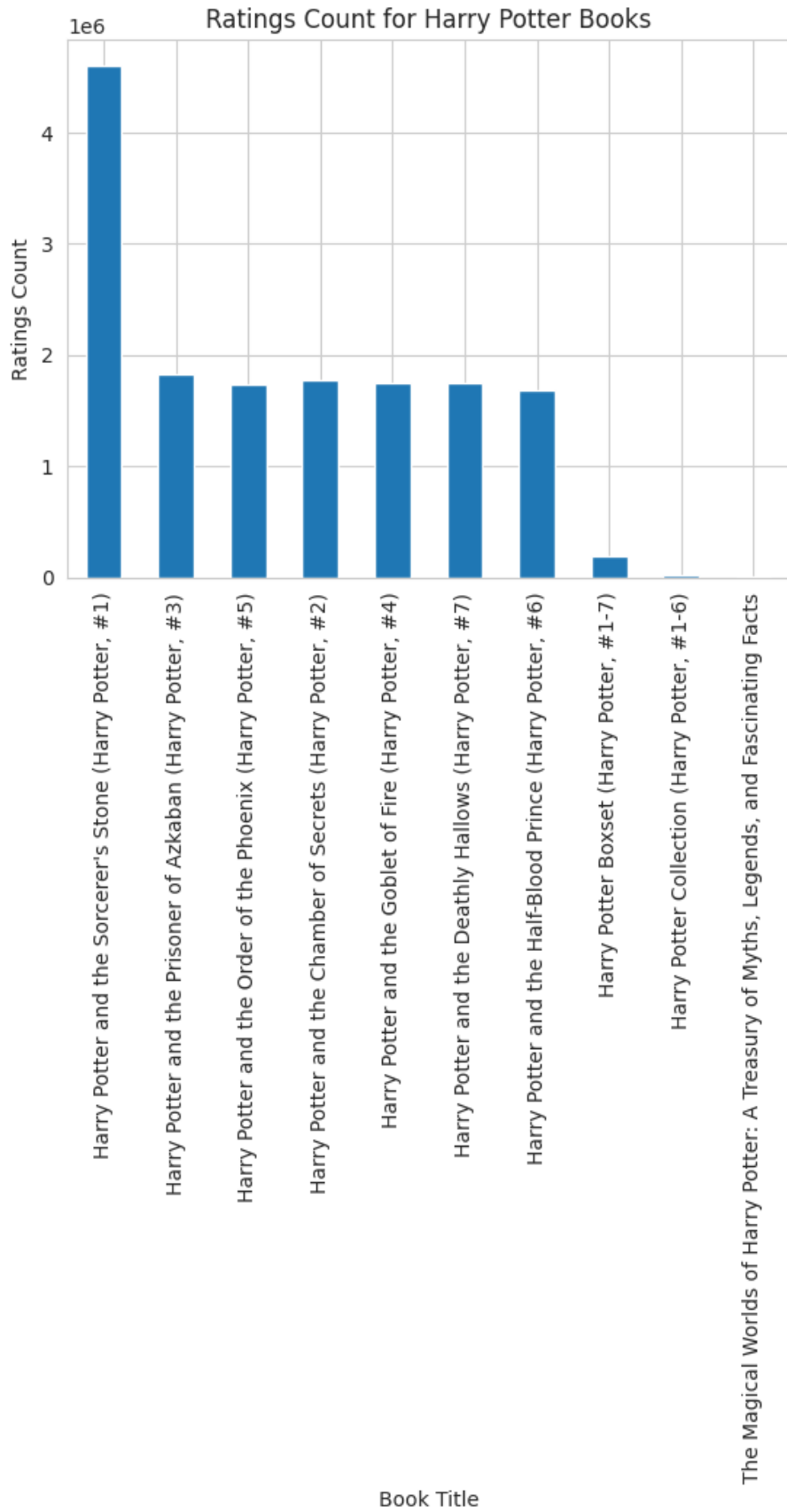
- descriptive statistics for rating columns

- The average rating of the Harry Potter books is: 4.489176670023024



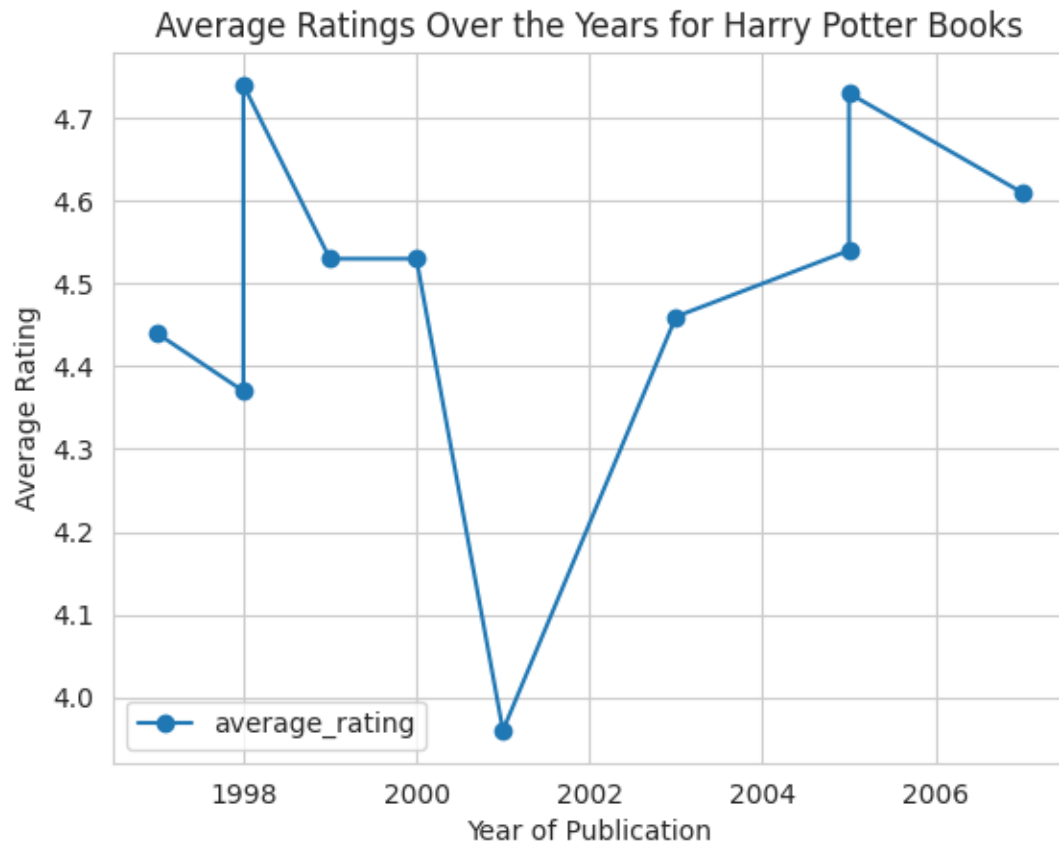
- a bar plot visualizes the average ratings of the Harry Potter books, along with a horizontal line representing the weighted average rating for the entire series. This visualization provides a clear comparison of the individual book ratings to the overall average rating.

And a horizontal line is added to the plot to represent the weighted average rating calculated earlier. This line helps to visually compare the average ratings of individual books to the overall weighted average rating for the entire series.

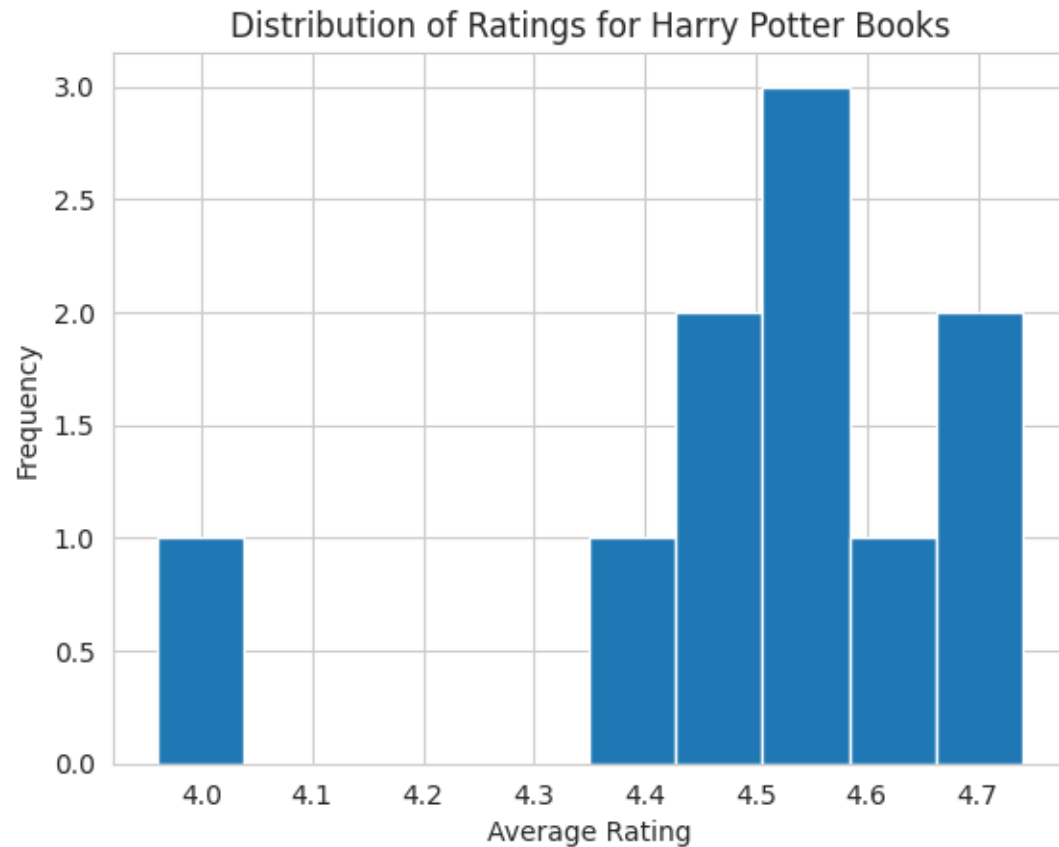


- bar
plot that
compares

the ratings count for each book in the Harry Potter series and shows that Harry potter and the sorcerer's Stone has the highest rating count



- Each representing the average rating of a Harry Potter book corresponding to its publication year. The plot demonstrates fluctuations in the average ratings over the years, indicating how the average rating has changed for each book over time. starts with a high average rating above 4.5 in 1998, then there is a significant increase to nearly 4.7 in 1999, then the rating slightly drops below 4.5 in 2000, then a sharp decline is observed in 2001, bringing the average rating down to around 4.2. In 2002, there is a sharp increase back to just below 4.7, then the rating slightly decreases in 2003, remaining above 4.5. The final data point in 2004 shows a small increase, ending just below 4.6.



- the distribution of ratings for the Harry Potter books

	title	ratings_count
1	Harry Potter and the Sorcerer's Stone (Harry P...	4602479
6	Harry Potter and the Prisoner of Azkaban (Harr...	1832823
9	Harry Potter and the Chamber of Secrets (Harry...	1779331
10	Harry Potter and the Goblet of Fire (Harry Pot...	1753043
11	Harry Potter and the Deathly Hallows (Harry Po...	1746574
8	Harry Potter and the Order of the Phoenix (Har...	1735368
12	Harry Potter and the Half-Blood Prince (Harry ...	1678823
96	Harry Potter Boxset (Harry Potter, #1-7)	190050
613	Harry Potter Collection (Harry Potter, #1-6)	24618
1036	The Magical Worlds of Harry Potter: A Treasury...	13820

- List of the most selling book in the series based on ratings count.

```
Most selling Harry Potter book based on ratings count:
book_id 2
goodreads_book_id 3
best_book_id 3
work_id 4640799
books_count 491
isbn 439554934
isbn13 9780439554930.0
authors J.K. Rowling, Mary GrandPré
original_publication_year 1997.0
original_title Harry Potter and the Philosopher's Stone
title Harry Potter and the Sorcerer's Stone (Harry P...
language_code eng
average_rating 4.44
ratings_count 4602479
work_ratings_count 4800065
work_text_reviews_count 75867
ratings_1 75504
ratings_2 101676
ratings_3 455024
ratings_4 1156318
ratings_5 3011543
image_url https://images.gr-assets.com/books/1474154022m...
small_image_url https://images.gr-assets.com/books/1474154022s...
Name: 1, dtype: object
```

- Most selling Harry Potter book based on ratings count