## Will Is Better than Denzel

## An Analysis of the Career of Will Smith vs Denzel Washington

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Data from IMDB is analyzed for actors Will Smith and Denzel Washington. This report aims to portray Will Smith as a better actor than Denzel Washginton. The approach I found best was to contrast the financial and popular careers of the actors (rather than critic/audience ratings).

 ${\bf Keywords:}\ {\bf data\ analytics;}\ {\bf data\ science;}$ 

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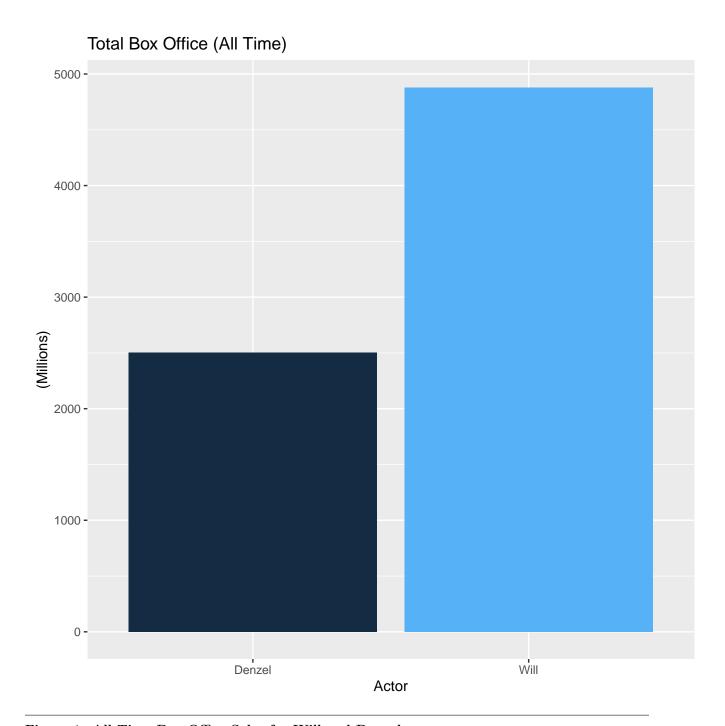


Figure 1: All-Time Box Office Sales for Will and Denzel: Box-office revenue for Will Smith's 60 most popular movies capture the vast majority of Sales in his career.

Approaching 5-billion, Will has accomplished approximately twice the revenue as Denzel washington in about 10 less years in the industry.

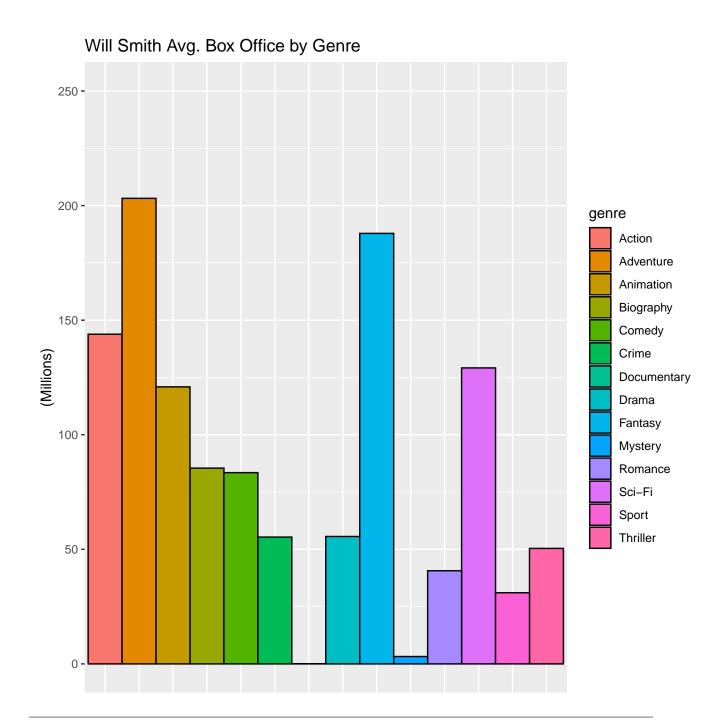


Figure 2: Will Smith Box Office Revenue by Genre: Average box office sales for each of Will Smith's movies tagged with a particular Genre on IMDB

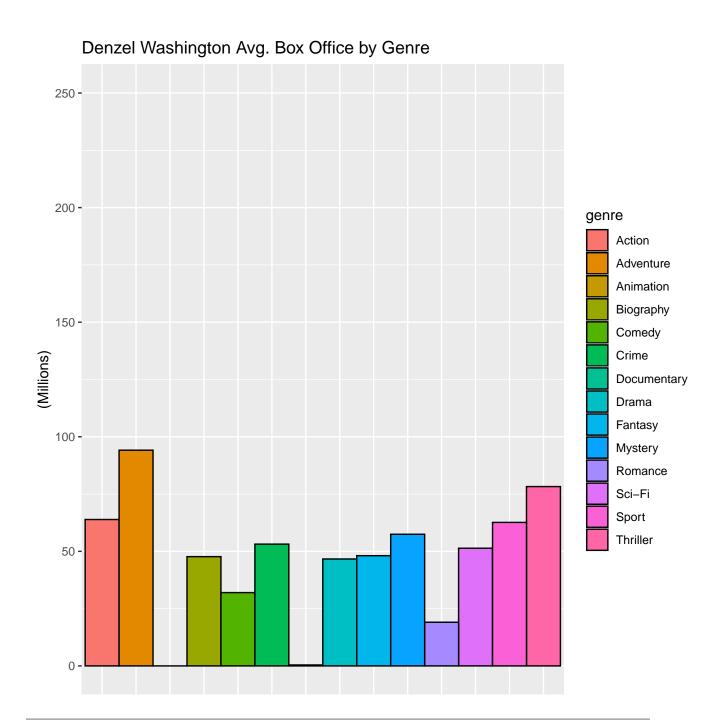


Figure 3: Denzel Washington Box Office Revenue by Genre: Average box office sales for each of Denzels's movies tagged with a particular Genre on IMDB

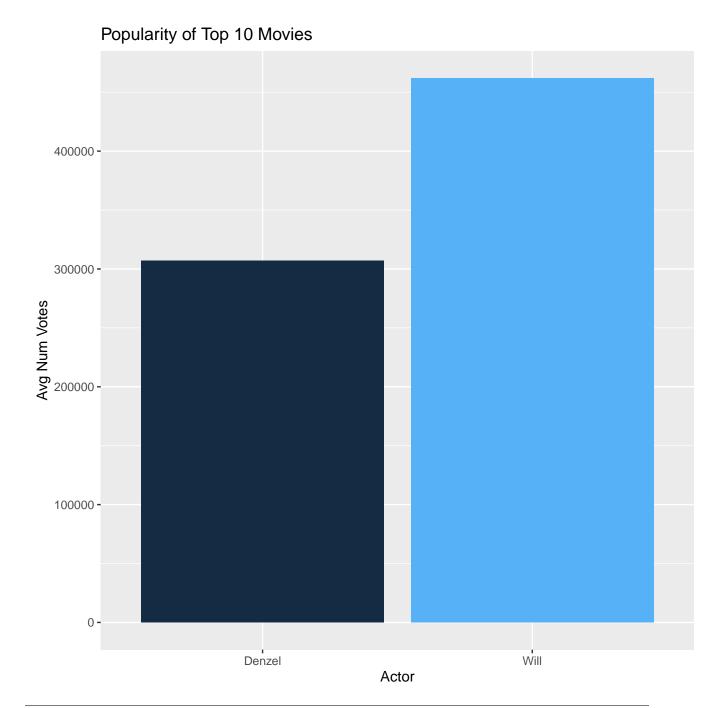


Figure 4: Average Number of IMDB Votes for Top 10 Movies:

An IMDB vote indicates that the user has interacted with the movie using IMDB's system. This is a measure of movie popularity rather than rating.

## 1 Questions

Denzel Washington has a slightly higher audience and critic rating across genres, however, actors, producers, and other members of the film industry don't put food on the table by receiving good reviews. Between two well-known actors, how is it such that one is rated slightly higher across the board but the other performs better financially and achieves greater popularity?

Something I would like to explore is an actors ability to star in "Blockbuster" movies. These are movies which are exceptionally popular and financially successful. I will call this "Blockbuster-Ability".

To display this visually, I have taken the average revenue of movies for both actors year-by-year, starting at the beginning of their careers and ending in 2020. (Figure 5) Taking the yearly-average in this scenario limits the possibility for an actor to star in 5-or-6 "average" movies and obscure the visual when looking for the existence of blockbusters.

The same can be said for the IMDB "votes" popularity metric year-by-year. (Figure 6)

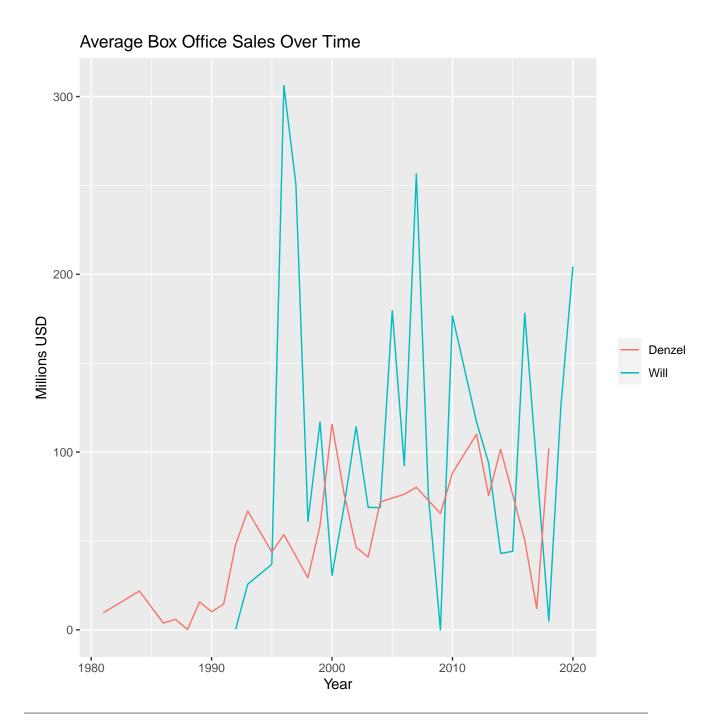


Figure 5: Average Movie Revenue Year-by-year:
The existence of Blockbuster movies can be measured as the volatility of this graph

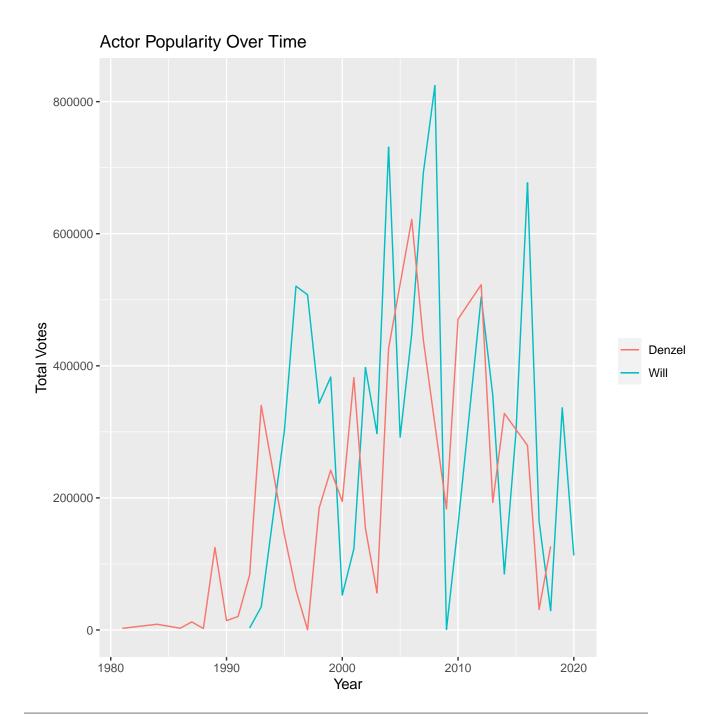


Figure 6: Actor Popularity Year-by-year:
This visual can be used to view the public's interest in an actor over time

## 2 Conclusion

The visuals make it clear that Will Smith is consistently able to "Knock it out of the park" with his performances at a greater scale then Denzel Washington.

The higher peaks on the visual: "Average Box Office Sales Over Time" (Figure 5) indicate that his performances have consistently brought more revenue on average, and include a greater probability for a blockbuster movie. This is re-enforced (although not quite as unmistakably) in the visual "Actor Popularity Over Time" (Figure 6)

In Conclusion, it is clearly in the best financial interest of any producer to cast Will Smith rather than Denzel Washington. In every practical sense, Will Smith is the better actor.

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