

## Analysis for Homework 04

This Homework attempts to answer three broad questions:

1. How did Tom Hanks rise to Stardom?
2. What sets Tom Hanks apart from his peers?
3. Is Tom Hanks' Popularity localized or a global trend?

### Visualisation -01

The first visualization I provided was that of a timeline. The above time integrates information about the illustrious career of Tom Hanks. The timeline is chronological, but does **not** follow a linear scale. This is clearly illustrated with the help of dotted/dashed lines on the time-line. The timeline integrates information from IMDb, the plot lines of the films, box office information and pictures of hanks from the relevant times as well! The idea is that one can gather the “crux” of the career of Tom Hanks, while at the same time look at the awards he received and how he transformed as an actor. The timeline also clearly highlight the versatility of Tom Hanks but clearly showing the various roles he played in the movies that he starred. The creative aspect of this timeline is how the various images of Tom Hanks from the films is juxtaposed with the Film Posters, which attempts to show his rise as a super-star in Hollywood. Additionally, we can see the various accolades which Tom won for his portrayal of the characters in these films.

### Interesting Aspect

An interesting aspect of this timeline is that it shows that Tom Hanks seems to perform well (get higher IMDb ratings) every time he acts as a character in law-enforcement / defence. This is clearly evident from the timeline where we see the movies Green Mile. Catch Me if you Can and Saving Private Ryan (movies where he played defence related roles) get extremely high IMDb scores!

### Visualisation -02

The second visualisation I provided was that of a Radar Chart. In this radar chart, I curated five basic metrics, which I subjectively feel quantify the success of an actor. These five metrics were, the number of Oscar Nominations, the number of Instagram followers, The number of movies acted, The number of years active in industry, and the average IMDb rating across all movies they have acted in. The number of instagram followers was retrieved from instagram, years active from Wikipedia, and the number of movies acted , Oscar nominations, and IMDb ratings were retrieved using the IMDb API for Python. I chose to compare Tom Hanks with two other famous Hollywood Actors namely: “Leonardo DiCaprio”, and “Russell Crowe”.

### **Interesting Aspect**

From the chart we can see that both Russell Crowe and Tom Hanks have a very similar profile to each other. However we can see that Russell Crowe's chart seems to be "engulfed" by Tom Hanks'. This is only because of the fact that Tom Hanks has spent more time in the cinema industry than Russell Crowe! However, more interestingly we see that Leonardo DiCaprio seems to match up with Tom Hanks in every regard as well despite having a shorter number of years active. Additionally, he seems to have a much larger number of Instagram followed and Oscar Nominations. This makes me realize the unfortunate reality that the data seems to suggest that Leonardo DiCaprio is a far more versatile actor when compared to Tom Hanks! While this statement is heard many times in regular conversation, this chart provides a solid data backed approach to validate the above statement.

### **Visualisation -03**

The third visualization I built was a 3-D map, which is an experimental new age visualization to show how popular Tom Hanks is around the world. In order to do this I first collected data from Google Trends. I used the API to fetch information about the keyword "Tom Hanks" around the world. The default information was a "country-level" popularity index. However, in case finer levels of data granularity was present ("City", or "Province" Level), finer levels of granularity were collected as well to supplement country level data. With the information in mind, I learnt to use the Web GL, and the Globe GL plugin. However, since the results of the Google Trends output was a location string, and since Globe GL required a set of coordinates, I used the geopy library in pandas to geocode the set of country/city names I had. Finally, I wrote a valid json file with the required format for globeGL!

The visualization thus produced shows a number of 3D bars projecting out of the surface of the earth, with the height of each bar and color intensity showing the relative popularity of Tom Hanks in that particular location. The globe also facilitates interactivity. Further, this visualization is much more elegant than that of a simple choropleth map, which would have been the alternative!

### **Interesting Aspect**

From the globe we notice that the popularity of Tom Hanks is particularly high in the regions which speak English. This is to be expected since Tom Hanks is an English actor after all. However, we can also see that his popularity is particularly high in France, and several areas in Europe as well! Similarly American allied countries such as South Korea, and the NATO countries also show relatively high amounts of popularity for Tom Hanks. One interesting find is that the popularity of Tom Hanks in Japan is extremely low! An explanation for the above observation could be the fact that the searches in Google in Japan are primarily conducted in Japanese and not English. This could be an outcome of how I collected the data! Similarly during the Data collection process, I found that the popularity of Tom Hanks in the Isle of Man was

nearly 100%, which seemed quite odd! On a quick google search, I found that there was a race car driver named “Tom Hanks” in the Isle of man which contributed to the high popularity of the name “Tom Hanks!”