



Animated Movies

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Today's Agenda

1. Top 10s
2. Correlations and analysis
3. Word frequency in title
4. Word frequency in different years
5. Word frequency vs years
6. Frequencies-years, genres, languages
7. Country Analysis - revenue, IMDb rating, popularity and produced movies
8. Country analysis with Top 10s
9. Articles that are consistent with our findings
10. Limitations



Top 10s with Movie Titles

Top 10 Movie Titles with Highest Revenue

- Frozen II - Revenue: \$1450026933
- The Super Mario Bros. Movie - Revenue: \$1355725263
- Frozen - Revenue: \$1274219009
- Incredibles 2 - Revenue: \$1242805359
- Minions - Revenue: \$1156730962
- Toy Story 4 - Revenue: \$1073394593
- Toy Story 3 - Revenue: \$1066969703
- Despicable Me 3 - Revenue: \$1031552585
- Finding Dory - Revenue: \$1028570889
- Zootopia - Revenue: \$1023784195



Top 10 Movie Titles with Highest Popularity

- Elemental - Popularity: 1008.94
- Carl's Date - Popularity: 819.429
- Spider-Man: Across the Spider-Verse - Popularity: 512.336
- Teenage Mutant Ninja Turtles: Mutant Mayhem - Popularity: 484.876
- Scooby-Doo! And Krypto, Too! - Popularity: 411.09
- The Super Mario Bros. Movie - Popularity: 410.411
- Ruby Gillman, Teenage Kraken - Popularity: 321.777
- Epic Tails - Popularity: 304.93
- One Piece Film Red - Popularity: 293.869
- Resident Evil: Death Island - Popularity: 264.731



Top 10 Production Companies by Total Revenue

1. Pixar, Walt Disney Pictures - Total Revenue: \$7934987635, Produced Countries: United States of America
2. Illumination, Universal Pictures - Total Revenue: \$4752136567, Produced Countries: United States of America
3. Walt Disney Pictures, Walt Disney Animation Studios - Total Revenue: \$4555772760, Produced Countries: United States of America
4. DreamWorks Animation, Paramount - Total Revenue: \$4131753443, Produced Countries: United States of America
5. Blue Sky Studios, 20th Century Fox Animation, 20th Century Fox - Total Revenue: \$3934506069, Produced Countries: United States of America
6. Walt Disney Pictures, Walt Disney Feature Animation - Total Revenue: \$3902741165, Produced Countries: United States of America
7. Pixar - Total Revenue: \$3863299965, Produced Countries: United States of America, Canada, United States of America
8. Walt Disney Pictures, Pixar - Total Revenue: \$3639185553, Produced Countries: United States of America
9. Walt Disney Animation Studios, Walt Disney Pictures - Total Revenue: \$2664908810, Produced Countries: United States of America
10. DreamWorks Animation, 20th Century Fox - Total Revenue: \$2238904436, Produced Countries: United States of America

Movie titles vs Production companies vs Revenue

Title: Frozen II - Revenue: \$1450026933

Production Companies: Walt Disney Pictures, Walt Disney Animation Studios,

Title: The Super Mario Bros. Movie - Revenue: \$1355725263

Production Companies: Universal Pictures, Illumination, Nintendo,

Title: Frozen - Revenue: \$1274219009

Production Companies: Walt Disney Pictures, Walt Disney Animation Studios,

Title: Incredibles 2 - Revenue: \$1242805359

Production Companies: Walt Disney Pictures, Pixar,

Title: Minions - Revenue: \$1156730962

Production Companies: Illumination, Universal Pictures,



Analysis and inferences

1. The top grossing movies and their production companies are in the top 10 for both
2. A production company with a track record of successful films is more likely to **produce another successful movie**
3. Shows **consistency of quality movies** by a company
4. **Investors and stakeholders** may use this information to identify production companies with a **strong track record of profitability**

Correlations

Correlation between runtime and IMDb rating: 0.211871

Analysis

- Weak positive correlation
 - Audiences may perceive longer movies as more substantial or engaging

Correlation between runtime and popularity: 0.18074

- Weak positive correlation
 - Longer movies may attract more attention from audiences

Correlation between imdb_rating and popularity: 0.126751

- Weak positive correlation
 - A modest overlap between critical acclaim and audience appeal.



Correlations

Correlation between revenue and popularity: 0.386493

Correlation between revenue and imdb_rating: 0.0640293

Correlation between runtime and revenue: 0.124748

Analysis

- Moderate positive correlation
- Movies with higher revenues --> more popular among audiences
- Financial success and audience appeal go hand in hand

- Very weak correlation
- Movie's box office performance does not necessarily reflect its critical acclaim or quality

- Weak positive correlation
- Factors other than runtime play a more significant role in determining a movie's revenue



Correlations

Correlation between budget and revenue: 0.775211

Correlation between budget and runtime: 0.149106

Correlation between budget and popularity: 0.380636

Correlation between budget and imdb_ratings: 0.0701381

Analysis

- Strong positive correlation
- Movies with higher budgets tend to generate significantly higher revenues

- Weak positive correlation
- Budget constraints may not heavily influence the duration of a film

- Moderate positive correlation
- Higher budgets are generally more popular among audiences, possibly due to increased marketing efforts or higher production values

- Very weak correlation
- Movie's budget does not necessarily guarantee a higher IMDb rating or critical success

Top 30 most common words in movie titles:

little: 476 occurrences
christmas: 351 occurrences
love: 224 occurrences
world: 209 occurrences
big: 207 occurrences
story: 204 occurrences
adventures: 187 occurrences
day: 185 occurrences
man: 182 occurrences
life: 180 occurrences
adventure: 177 occurrences
cat: 176 occurrences
time: 175 occurrences
legend: 175 occurrences
great: 169 occurrences
new: 163 occurrences
tale: 162 occurrences
night: 160 occurrences
me: 147 occurrences
magic: 142 occurrences
space: 137 occurrences

Word frequency in title

- Innocence and family oriented - **little, love, cat, friends, dog, pink**
- Contrast to little - **big**
- Adventure, fantasy and storytelling - **tales, story, adventure, legend, magic, princess, dragon, king**
- Space-Related - **space, star**



Word frequency in different years

For the older years (prior to 1950):

- Words like "felix," "alice," "bobby," "bumps," and "kapten" suggest a **focus on specific characters or individuals**
- **Themes seem whimsical and playful** with words - very theatrical circus like "circus," "parade", "monkey", "dancing", "clown", "theatre", and "enchanted."
- **Prevalence of names** (e.g., "felix," "charley," "bobby") and **common nouns related to everyday life**
- The titles often reflect **simpler narratives**



Word frequency in different years



For the newer years (from 2010 onwards):

- There's a **shift towards more generalized themes and concepts**, with words like "world," "life," "love," "story," and "adventure" which are also very comfort and calming
- However, there's an **emergence of more action-oriented words** like "vs," "battle," and "fight," "justice" + more **Superhero and fantasy elements become more prominent** with words like "super," "heroes," "princess," and "magic."
- **Explicit audience acknowledgement** with words like "little," and "school."
- Words like "night," "lost," "dead," and "ghost" hint at **stories with elements of mystery, suspense, or horror**

Word frequency in title according to different languages

- **English** - Christmas, innocence - friends, little, cat, pink, Adventures
- **Japanese** - love, mystical and fantasy, girl, specific characters
- **French** - short and little, mystical - magic ,night, world,
- **Italian** - mostly fantasy oriented - very specific characters and stories- winx club, pinocchio, red, titanic
- **Spanish** - Old tale related
- **Chinese** - big & little , kings, kingdom tale related, lots of animals

Original Language: en
christmas: 327
little: 259
friends: 149
cat: 135
adventures: 130

Original Language: ja
love: 69
legend: 64
world: 63
dragon: 60
great: 57

Frequencies- years and genres

Release Year Frequency

2021: 1942
2022: 1351
2023: 1250
2020: 1067
2019: 920
2017: 810
2018: 784
2015: 778
2016: 756
2014: 756
2013: 734
2012: 668
2010: 618
2011: 616
2009: 533
2008: 494
2006: 484
2007: 461

Years

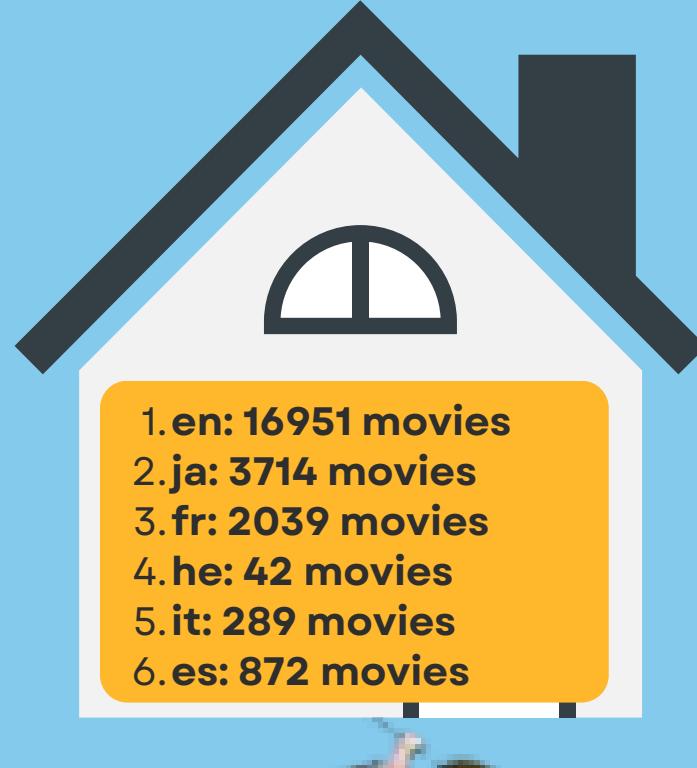


All genre Frequency

Action: 2040
Adventure: 2819
Animation: 30488
Comedy: 6060
Crime: 264
Documentary: 943
Drama: 2003
Family: 5419
Fantasy: 2989
History: 314
Horror: 943
Music: 1121
Mystery: 434
Romance: 647
Science Fiction: 1984
TV Movie: 529
Thriller: 240
War: 266
Western: 124

Genres

Frequencies- languages



Country Analysis - revenue, IMDb rating, popularity and produced movies



Revenue and Production

Leads in terms of revenue generation and produces the highest number of animated movies --> robust infrastructure, creative talent pool, and market demand



Quality and Recognition

Audiences not only watch American animated movies but also perceive them favorably, leading to increased revenue



Popularity

Highlights their global appeal and widespread recognition

Country with the highest revenue: United States of America

Country with the highest IMDb rating: United States of America

Country with the highest popularity: United States of America

Country with the highest total number of movies produced: United States of America

Country Analysis with Top 10s

Evident that the **United States dominates the animated movie industry** in terms of revenue, IMDb ratings, popularity, and production volume.



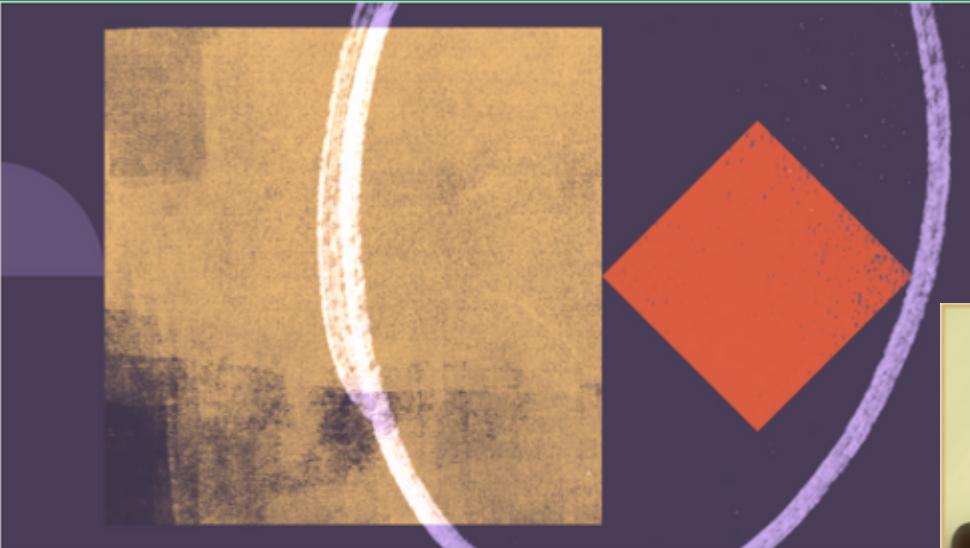
- Biggest **revenue generator**
- Leader in producing **high-quality** animated films
- Major studios like **Pixar, Walt Disney Pictures, and DreamWorks Animation**



The **top 10 production companies** by total revenue are also **primarily based in the United States**, further highlighting its dominance in the market.



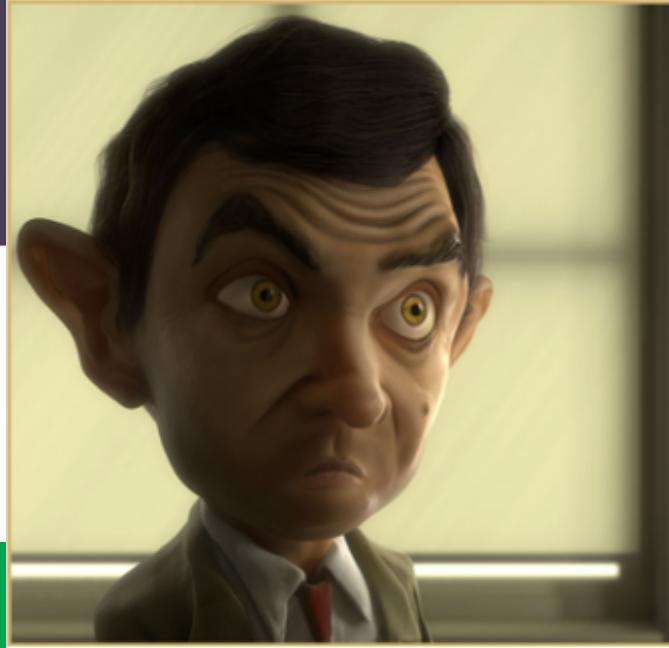
Articles that are consistent with our findings



What are the most common themes in animation across different genres?

Explore how animation can explore various themes through fantasy, comedy, drama, horror, and science fiction. Learn from examples of popular and influential animation films and shows.

LinkedInEditors / Oct 20, 2023



Animation Market Statistics: The Ultimate List in 2024

What are the top animation market statistics? Here's what you need to know about the growing animation market and where it is headed.

Academy of Animated Art / Jan 11



2024 Top 10 Best Animation Companies Worldwide - Vitrina AI

Dive into the world of animation with our curated list of the year 2024 top 10 best animation companies of 2024! Find your perfect creative partner for animation with Vitrina AI.

Vitrina AI / Apr 11
By @Bipul

Limitations

- Data set did not name the production companies accurately
- Countries listed were repeated for the same production companies
- There were some null values spread across different columns. We also encountered some rows with data that were not alphanumeric but were symbols
- For the release date column, the date was represented in more than one formats which made it harder to extract
- In the functions of the code, each individual function was dealing with different pairs of data types, hence a multitude of sort function were needed for the different parameters

thank you

