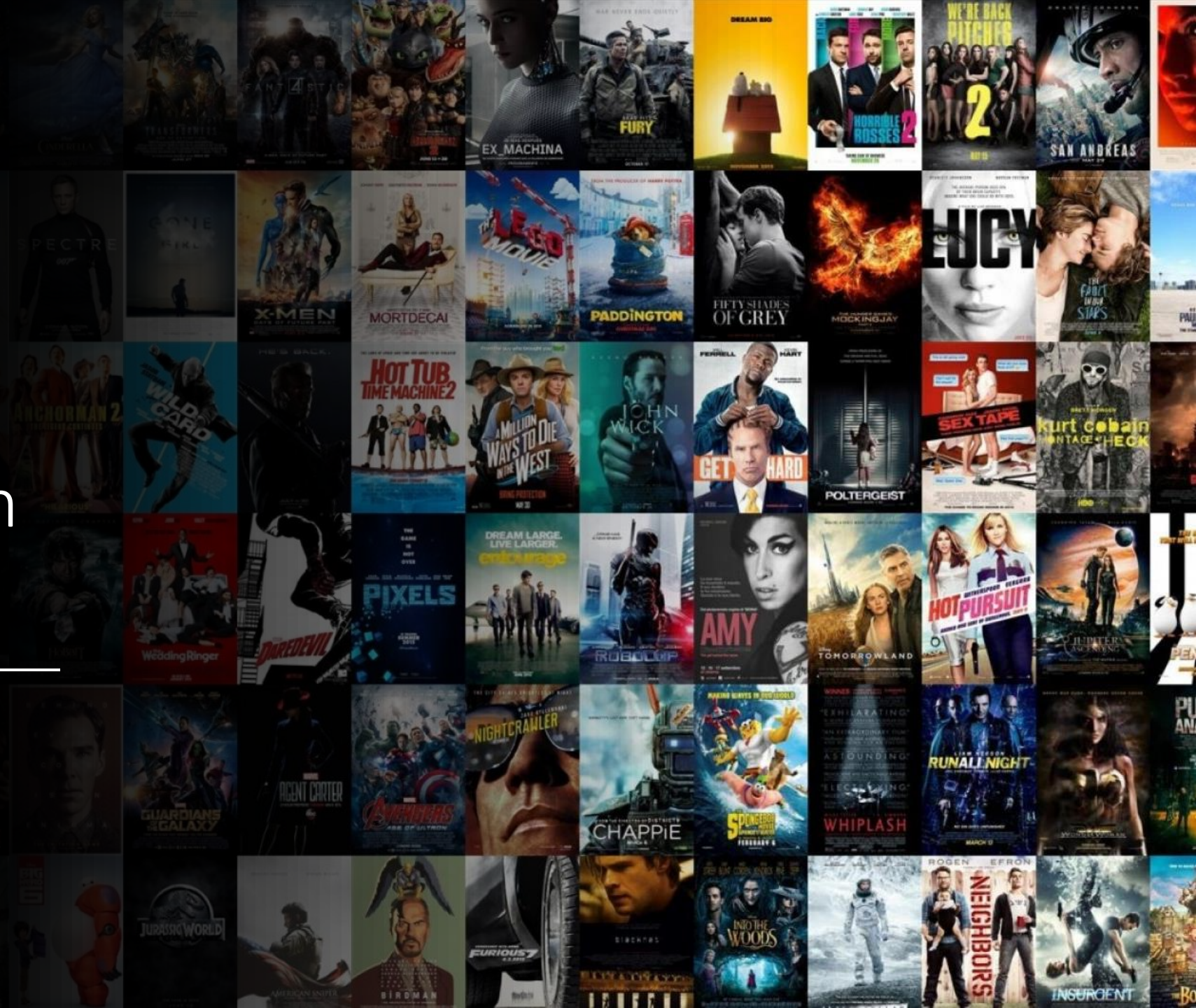




Movielens recommendation system



the dataset

- The dataset contains 100836 ratings and 3683 tag applications across 9742 movies. These data were created by 610 users between March 29, 1996 and September 24, 2018. The dataset consists of four csv files and a readme text file: links, movies, ratings, and tags with the following parameters:
- movies.csv
 - (9742, 3) rows/columns
 - 'movieId', 'title', 'genres'
- ratings.csv
 - (100836, 4) rows/columns
 - 'userId', 'movieId', 'rating', 'timestamp'
- tags.csv
 - (3683, 4) rows/columns
 - 'userId', 'movieId', 'tag', 'timestamp'
- links.csv
 - (9742, 3) rows/columns
 - 'movieId', 'imdbId', 'tmdbId'
- README.txt
 - much like a dictionary

Explicit recommendations




**How do you rate
our App?**



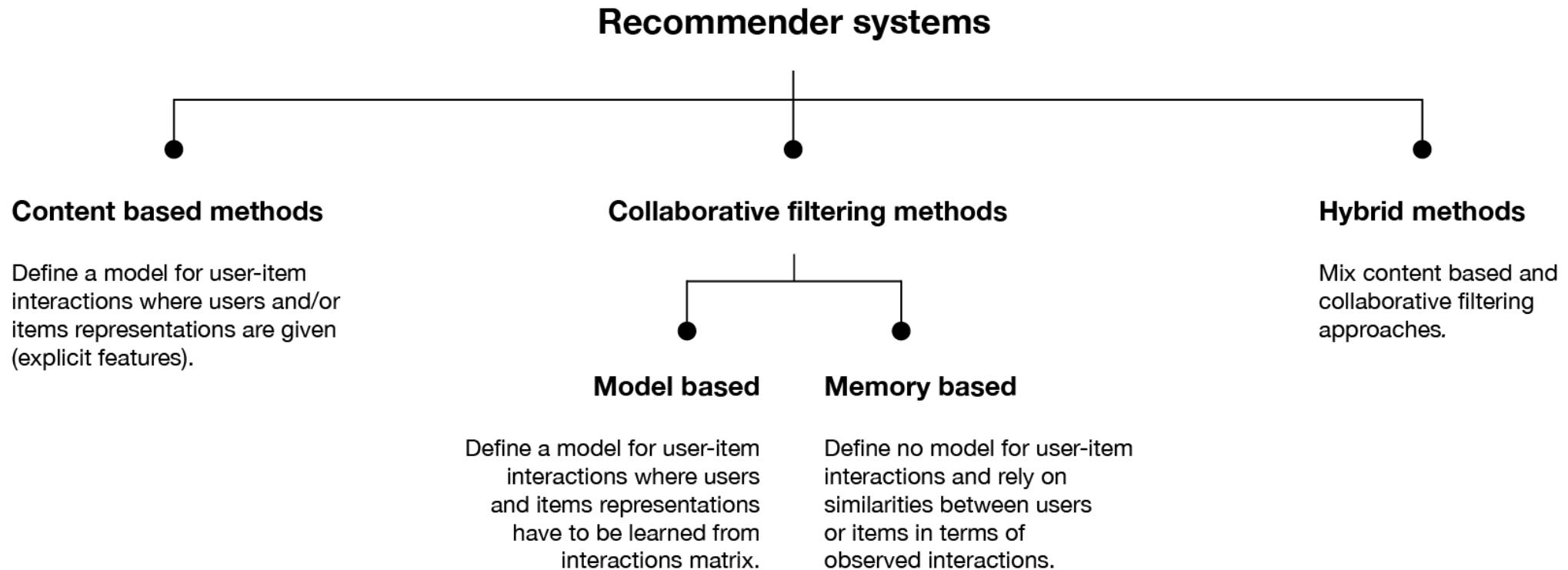
Tap the number of stars to rate it on the
App Store

Implicit recommendations

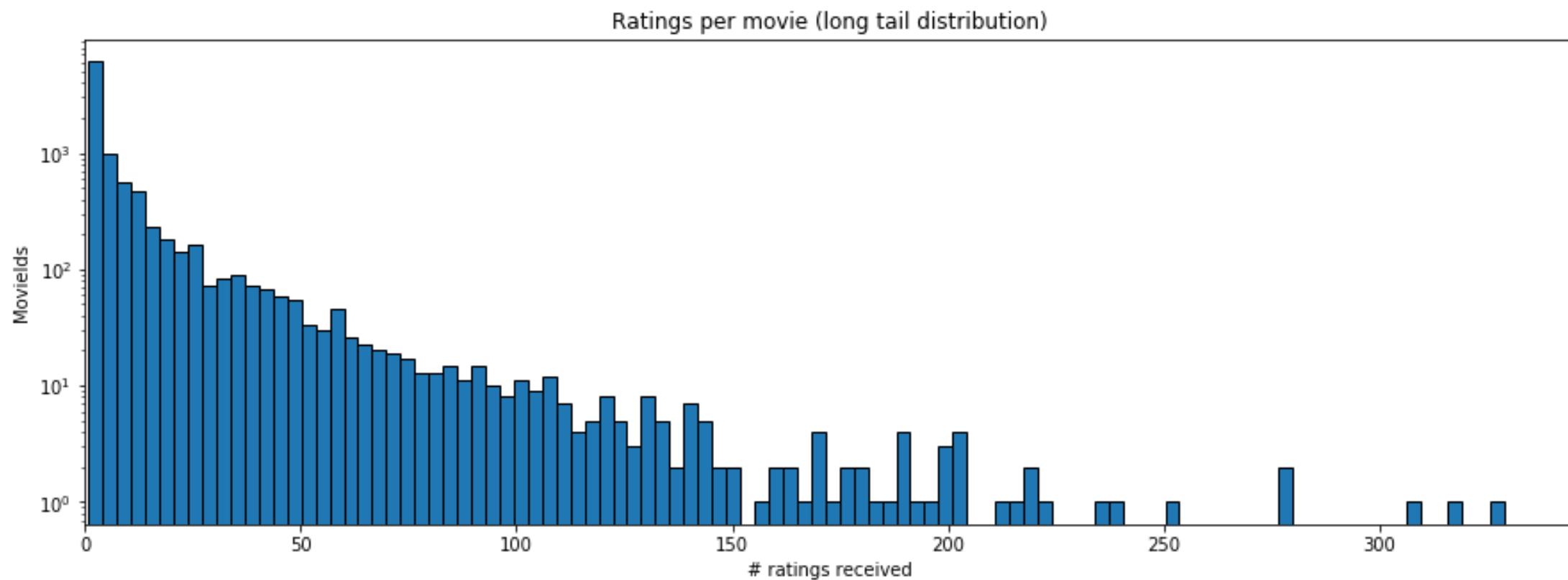
Related to items you've viewed ⓘ x

	DJI Mavic Mini Combo - Drone FlyCam Quadcopter UAV wit... ★★★★☆ 1189 \$499.00
	DJI Mavic 2 PRO Drone Quadcopter Fly More Kit... ★★★★☆ 41 \$1,997.99
	DJI Mavic 2 Pro Drone Quadcopter with Fly More... ★★★★☆ 132 \$1,999.99

Recommendation systems in general



The need for recommendation systems



2001: A Space Odyssey (1968)	1.280072
Blade Runner (1982)	0.671624
African Queen, The (1951)	0.627018
Lawrence of Arabia (1962)	0.622976
2010: The Year We Make Contact (1984)	0.616504
North by Northwest (1959)	0.596037
Abyss, The (1989)	0.587159
Untouchables, The (1987)	0.586499
Clockwork Orange, A (1971)	0.570817
Chinatown (1974)	0.568316

Ratings based recommendations

```
1 # genre based recommendations
2 genre_based_recommendations('Zombieland (2009)')

7154                                Zombieland (2009)
8434                                Zombeavers (2014)
8565                    Dead Snow 2: Red vs. Dead (2014)
9035    Scouts Guide to the Zombie Apocalypse (2015)
62                                From Dusk Till Dawn (1996)
6251                    Snakes on a Plane (2006)
6324                                Feast (2005)
11                    Dracula: Dead and Loving It (1995)
654    Tales from the Crypt Presents: Bordello of Blo...
1478                                Gremlins (1984)
Name: title, dtype: object
```

Genre based recommendations

Hybrid based recommendation

```
1 # make predictions for user based on userId
2 sample_recommendation(model, data, [6, 8, 11])
```

User 6

known positives:

Get Shorty (1995)

Twelve Monkeys (1995)

Babe (1995)

Recommended:

Raiders of the Lost Ark (1981)

Butch Cassidy and the Sundance Kid (1969)

Alien (1979)

M*A*S*H (1970)

Sting, The (1973)

Indiana Jones and the Last Crusade (1989)

Blade Runner (1982)

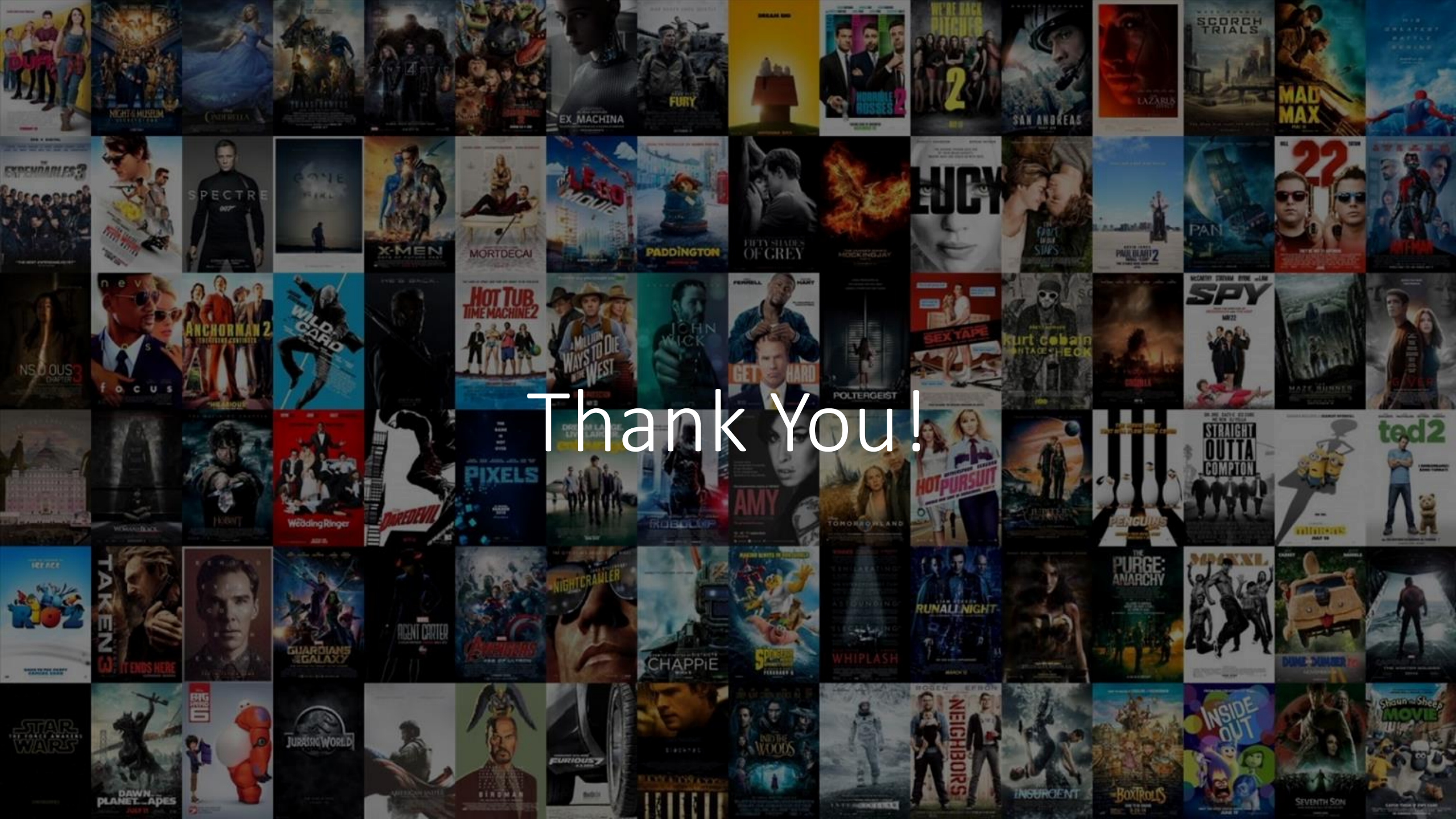
Jaws (1975)

Terminator, The (1984)

Blues Brothers, The (1980)

The benefits of a recommendation system

- In 2018, Walmart's [online sales grew 40%](#), and it became the third-largest ecommerce retailer in the country. Between early 2017 and early 2019, Walmart saw [207% growth](#) in its ecommerce buyer base.(tinuiti)
- 70% of YouTube videos are based on their recommendation implementation.
- Netflix saves nearly a billion each year thanks to their recommendation system(ACM.org)
- The Amazon Recommendations Secret to Selling More Online. The company reported a 29% sales increase to \$12.83 billion during its second fiscal quarter, up from \$9.9 billion during the same time last year. (rejoiner.com)



Thank You!