



MOVIE INSIGHTS

with Propensity

Movio Cinema's insights-driven extension module has been designed to automatically determine *how likely* each member is to see a particular movie, using Movio's proprietary Machine Learning based Propensity Algorithm™.

HOW IT WORKS

The Movie Insights Propensity Algorithm™ is a powerful tool that calculates the likelihood of moviegoers to see a particular movie. It works by assigning a score to each member in your database and then ranking them in order from most likely to unlikely to see that targeted movie.

In doing so, Movie Insights allows you to develop more tailored messaging, and the ability to match the value of incentives to each moviegoer's individual propensity.



Select movies

Quickly identify a movie title or create a model audience using comp titles.



Display distribution

Automatically displays audience propensity distribution charts.



Refine your audience

Easily select predefined segments or an arbitrary size of members.



Save your audience

Simply export the list of moviegoers to Group Builder.

METHODOLOGY

To test the effectiveness of the Movie Insights with Propensity module we conducted an experiment during the the first week of *Black Panther*, assessing six movies that were in theaters at the start of that week: *Black Panther*, *Peter Rabbit*, *Fifty Shades Freed*, *Den of Thieves*, *12 Strong*, and *Hostiles*.

Using data from prior to the start of the week, the Propensity Algorithm™ assigned a score to each member and divides the audience into segments (most likely, likely, less likely and unlikely) based on their likelihood to see one of these six movies.

To evaluate the performance of this tool, we then compared the visitation rates of the four segments to the average visitation rate* to the selected movie.

* Average visitation rate is defined as the number of members who saw the target movie divided by number of active members.

RESULTS

Target Week: Opening Week of *Black Panther*

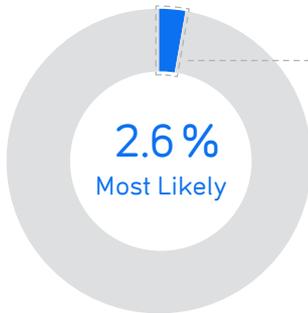
Black Panther 7.8% Av. Visitation Rate

SEGMENT	A % of members in each segment	B % of segment who saw <i>Black Panther</i>	C Multiple of av. visitation rate (7.8%)	D % of total admissions to <i>Black Panther</i>	E % who saw <i>Black Panther</i> over total admissions
Most Likely*	2.6%	46.5%	5.9x	15.7%	93.0%
Likely	11.7%	23.9%	3.1x	35.7%	84.1%
Less Likely	20.6%	10.3%	1.3x	27.0%	70.4%
Unlikely	65.1%	2.6%	0.3x	21.7%	43.9%
All Active Members	100%	7.8%	1.0x	100%	68.0%

SEGMENTS EXPLAINED

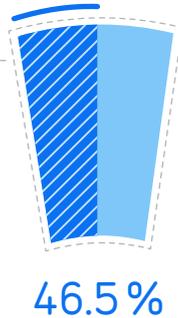
*Example: *Black Panther*, 'Most Likely' Segment

A



2.6% of all active members were defined as 'most likely' to see *Black Panther*.

B



46.5% of this 'most likely' segment watched *Black Panther*.

C

Av. Visitation Rate

All Active Members	7.8%
Most Likely Segment	46.5%

5.9x
Higher than Average

Of all active members, an average of 7.8% went to see *Black Panther* in opening week.

Active members in the 'most likely' segment saw *Black Panther* at a visitation rate 5.9x higher than all active members.

Average visitation rate is defined as the number of members who saw the target movie divided by total number of active members.

Note: Multiples are calculated based on four decimal place numbers

D



Total Admissions

The 'most likely' segment of 2.6% were responsible for 15.7% of the total admissions to *Black Panther* during the target week.

E



Black Panther

Out of everyone in the 'most likely' segment who visited the cinema during the target week, 93% of them saw *Black Panther*.

Peter Rabbit 1.2% Av. Visitation Rate

SEGMENT	A % of members in each segment	B % of segment who saw <i>Peter Rabbit</i>	C Multiple of av. visitation rate (1.2%)	D % of total admissions to <i>Peter Rabbit</i>	E % who saw <i>Peter Rabbit</i> over total admissions
Most Likely	0.2%	22.0%	18.5x	4.3%	63.4%
Likely	3.6%	7.8%	6.6x	23.9%	38.2%
Less Likely	12.8%	2.9%	2.4x	31.4%	17.9%
Unlikely	83.3%	0.6%	0.5x	40.4%	5.6%
All Active Members	100%	1.2%	1.0x	100%	10.3%

Fifty Shades Freed 2.0% Av. Visitation Rate

SEGMENT	A % of members in each segment	B % of segment who saw <i>Fifty Shades Freed</i>	C Multiple of av. visitation rate (2.0%)	D % of total admissions to <i>Fifty Shades Freed</i>	E % who saw <i>Fifty Shades Freed</i> over total admissions
Most Likely	0.01%	25.0%	12.7x	0.1%	89.0%
Likely	0.7%	12.6%	6.4x	4.5%	70.9%
Less Likely	6.8%	7.4%	3.8x	25.4%	48.1%
Unlikely	92.5%	1.5%	0.8x	69.9%	13.3%
All Active Members	100%	2.0%	1.0x	100%	17.1%

Den of Thieves 0.1% Av. Visitation Rate

SEGMENT	A % of members in each segment	B % of segment who saw <i>Den of Thieves</i>	C Multiple of av. visitation rate (0.1%)	D % of total admissions to <i>Den of Thieves</i>	E % who saw <i>Den of Thieves</i> over total admissions
Most Likely	0.3%	3.2%	31.9x	7.6%	7.5%
Likely	1.9%	1.4%	14.0x	25.7%	4.3%
Less Likely	7.7%	0.3%	3.2x	23.8%	1.3%
Unlikely	90.2%	0.2%	0.5x	42.9%	0.5%
All Active Members	100%	0.1%	1.0x	100%	0.9%

Note: Multiples are calculated based on four decimal place numbers

12 Strong 0.1% Av. Visitation Rate

SEGMENT	A % of members in each segment	B % of segment who saw <i>12 Strong</i>	C Multiple of av. visitation rate (0.1%)	D % of total admissions to <i>12 Strong</i>	E % who saw <i>12 Strong</i> over total admissions
Most Likely	0.2%	2.3%	19.1 x	3.3%	14.3%
Likely	2.2%	1.3%	10.7 x	24.0%	6.4%
Less Likely	9.5%	0.4%	3.0 x	28.9%	2.0%
Unlikely	88.1%	0.1%	0.5 x	43.8%	0.6%
All Active Members	100%	0.1%	1.0 x	100%	1.0%

Hostiles 0.2% Av. Visitation Rate

SEGMENT	A % of members in each segment	B % of segment who saw <i>Hostiles</i>	C Multiple of av. visitation rate (0.2%)	D % of total admissions to <i>Hostiles</i>	E % who saw <i>Hostiles</i> over total admissions
Most Likely	0.1%	2.2%	10.4 x	1.4%	16.7%
Likely	2.0%	2.2%	10.5 x	20.9%	12.2%
Less Likely	7.7%	0.8%	3.9 x	30.3%	4.8%
Unlikely	90.2%	0.1%	0.5 x	47.4%	1.0%
All Active Members	100%	0.2%	1.0 x	100%	1.8%

Note: Multiples are calculated based on four decimal place numbers

CONCLUSION

We ran similar experiments for multiple weeks and the results aggregated consistently showed that the Movie Insights with Propensity module produced highly effective audience segments. When compared to the average visitation rates for each movie, Movie Insights achieved the following:

- **Most likely** – 5x more likely to see the promoted movies than the average visitation rate of all active members in the exhibitor’s database.
- **Likely** – 3–5x more likely to see the promoted movies than the average visitation rate of all active members in the exhibitor’s database.

- **Less likely** – 1–3x more likely to see the promoted movies than the average visitation rate of all active members in the exhibitor’s database.
- **Unlikely** – less than 1 x likely to see the promoted movies than the average visitation rate of all active members in the exhibitor’s database.

By using Movie Insights with Propensity, you can identify each moviegoer’s individual propensity to see a particular movie, allowing you to tailor your messaging and optimize the use of incentives.