What is the optimal target audience for maximizing movie profitability?

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Highlights

- Movie viewers can be grouped into three primary types: comedy lovers, drama lovers, and viewers with wide/eclectic tastes
- For a generic movie, the optimal audience composition is 20% comedy lovers, 20% drama lovers, and 60% viewers with wide/eclectic tastes (p<0.001)

Background

The movie industry is a competitive market with large budgets and variable success contingent on reception by viewers. Film producers traditionally face a tradeoff when deciding whether to cater to certain niche populations within a genre or to more general populations across genres. By tracking user preferences across multiple genres, we help movie producers **identify the optimal audience breakdown for maximizing profit.**

Data

We used movie rating data generated by MovieLens users and data on movie profits from the Movie Industry data set.

Methodology

Step 1: Use MovieLens dataset to define a vector embedding to represent a user's genre preferences.
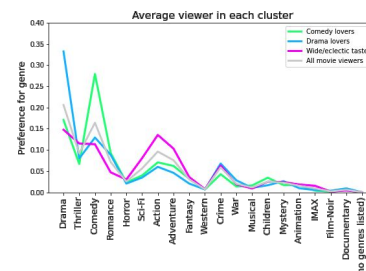
Step 2: Use this vector to cluster users and determine dominant user archetypes.

Step 3: Identify relationships between a movie's viewership composition (defined in terms of cluster membership) and its profitability.
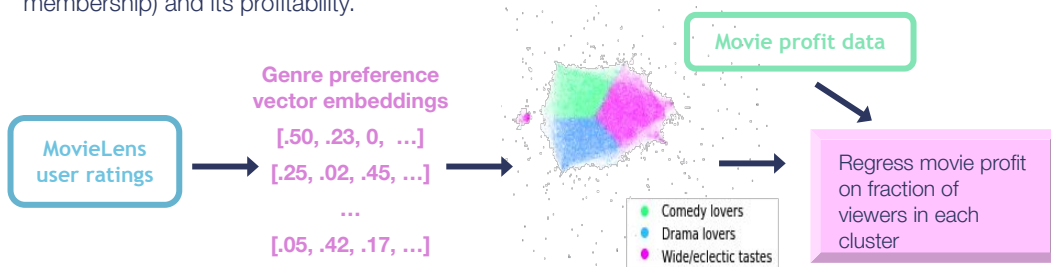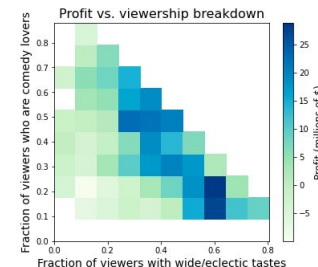

Results

Figure 1. The genre preferences of the three viewer types we identified

Figure 2. Movie profit as a function of audience composition

To *maximize profit,* movie producers should target an audience comprised of:

20% drama lovers   **20%** comedy lovers   **60%** viewers with wide/eclectic tastes

Genre-specific recommendations:

1. Drama movies should add humor.
2. Comedies should add elements from other genres.
3. Romance movies should balance comedy and drama.
4. Sci-fi movies should limit comedic elements.
5. Thriller, action, adventure, and crime movies should target the optimal audience identified for all movies.