

Regression Analysis for Domestic Box Office with the Bass Diffusion Model and Monte Carlo Simulation

Business Problem

Movie studio making decisions on creative content focusing on domestic Box Office Revenue

Data

The Numbers

Yearly Box Office revenue 11 years

Weekly Box Office Revenue 11 years

Distributor, Genre, Source, Creative Type, Inflation Adjusted Domestic Bo

IMDB

Daily Dumps

8 mil records movies, principals, Actors actresses, Directors

Methods

Created Actor Influence-formula

Created Director Influence-formula

Classified each move in a Franchise or Not

Each movie fit to Bass Model for 3 coefficients M (market size, initially set to 1,000,000), p (coefficient of innovation, initially set to 0.003) and q (coefficient of imitation, initially set to 0.5).

Results

-Top Features





Sensitivity

Monte Carlo Simulation Example

Future Work

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