

Predicting Opening Weekend Box Office Success: Using Social Media Sentiment and YouTube Data

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Abstract

Can pre-release audience attention predict a film's opening weekend success? We approach this problem using the Box Office Prediction System (BOPS) with data collected from Twitter and YouTube. OpinionFinder was used to determine the sentiment of movie related tweets for each of the 18 films studied. BOPS uses multiple linear regression to model the relationship between pre-release Twitter sentiment and opening weekend box office success as well as the relationship between pre-release YouTube sentiment and opening weekend box office success. We further modeled both Twitter and YouTube sentiment combined to determine if a stronger relationship exists than with the individual models. The results of our study showed that YouTube sentiment was not as good a predictor as Twitter and when combined there was no stronger a relationship than the individual models.