**OBJECTIVE**

Let ai be the user-entered parameters for the multiobjective weights

Let fi be the

***Things that the model doesn’t know***

**CONSTRAINTS**

* Number of Theatres
  + Upper bound only
* Content Rating
  + Binary Cons
  + Can choose multiple ratings
* Num of Nominated Actors
  + Upper Bound
* Num of Winning Actors
  + Upper Bound
* Num of Director Awards
* Release Date
  + Let them cancel out specific dates
* Months
  + They list the months they prefer
* Budget
  + Upper Bound only
* Runtime
  + Lower and upper bound
* Genre
  + Similar to content rating
* Google Trends
  + Difficult scale -need to be clever - X means “market this like move A”, Y means “market this like movie B”, etc.

**OPTIMIZATION METHODS/HEURISTICS**

* Yeah, about that….
* May take whatever ACTUAL predictive model we have here and then just replace it with a linear model (for easier optimization)
  + Rafid was suggesting “piecewise linear regression model”
* Aside from that, we can just

**PRESENTATION**

* Give some examples of movies that are similar to the optimal movie that is proposed
  + Will need to use some sort of distance measure between movies

**SOURCES**

* See Lecture 18 - Optimization on Baseball flexibility
  + <https://arxiv.org/pdf/0803.4112.pdf> (he had some term called correlated random effect variable in the optimization line)
  + Come up with metric (see Lecture 18) - avg case optimization model (compare relative increase in improvement from increasing specific parameter values - not sure if this is applicable)