

PROJECT LUTHER

PREDICTING GDP FOR MOVIES ADAPTED FROM BOOKS

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WHY MOVIES ADAPTED FROM BOOKS?

- SUCCESS OF MOVIES ADAPTED FROM BOOKS VARIES



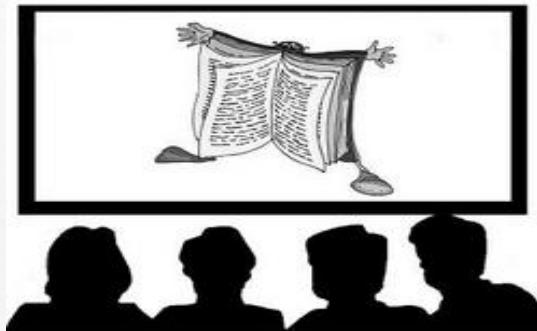
GONE GIRL: \$ 1,119,929,521



DARK PLACES : \$208,000



SERENA: \$200,907

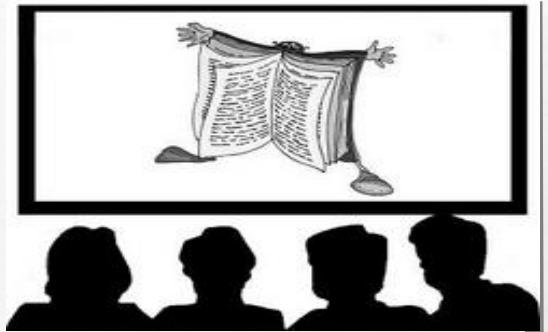


DATA SOURCE

- **BOX OFFICE MOJO**

- **TITLE**
- **GENRE**
- **DISTRIBUTOR**
- **RELEASE DATE**
- **RUN TIME**
- **DOMESTIC GROSS**
- **BUDGET**
- **RATING**

The screenshot shows the homepage of Box Office Mojo. At the top, there's a search bar labeled "Search Site" with a placeholder "Search..." and a "Search" button. Below it are social media links for Facebook and Twitter, and a "Features" section with "News" and "Release Sched." links. A "Showtimes at IMDB" link is also present. On the left, there's a sidebar with "Box Office" options like Daily, Weekend, Weekly, Monthly, Quarterly, Seasonal, Yearly, All Time, Chart Watch, and International. Below that is an "Indices" section with "Movies A-Z", "Studios", and "People". The main content area features a "ALPHABETICAL INDEX" with letters from A to Z. Below it is a welcome message about the database's size and update frequency. Underneath is a "NEW & FEATURED RELEASES" section displaying movie posters for "The Finest Hours", "Kung Fu Panda 3", and "Fifty Shades of Black".



N: ~16000 movies

DATA SOURCE

- CHASING FROGS (2000-2013)

- BOOK NAME
- MOVIE NAME
- AUTHOR NAME

The screenshot shows a website interface for movie adaptations. At the top left is a logo for "The Movie Store at Movie-O". Below it is a sidebar titled "Recently Added Adaptations" listing titles like "World War Z", "Devil's Knot", "Serena", "Syrup", "Great Gatsby, The", "Monuments Men", "The", "Percy Jackson: Sea of Monsters", "Ender's Game", "Mortal Instruments: City of Bones, The", and "Company You Keep.". To the right is a main content area with a title "2013 Movies Based on Books" featuring a cartoon frog reading a book. It includes a section for "ENDER'S GAME" by Orson Scott Card, a plot summary, and a section for "CARRIE" by Stephen King, also with a plot summary. At the bottom is a section for "GREAT GATSBY, THE" by F. Scott Fitzgerald. On the far right is a vertical sidebar titled "By Year" with a list of years from 2013 down to 1998.

2013 Movies Based on Books
Read the Book Before You See the Movie. Which is better? You decide. Browse movies based on books.

ENDER'S GAME (Science Fiction, War, Aliens, Adaptation)
PLOT: After twice being attacked by an alien race known as the Formics, humans have created an elite school in space to train future fleet commanders in preparation for a third attack. Ender Wiggin ([Asa Butterfield](#)) is one of the Battle School's newest students and with a few tricks up his sleeve, he might be exactly what the world needs to survive. **AUTHOR:** [Orson Scott Card](#)

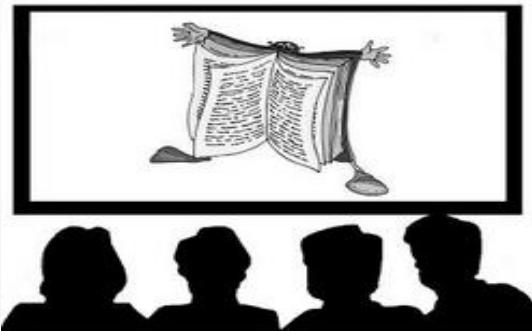
CARRIE (Horror, Thriller, Prom, Remake, Adaptation)
PLOT: Bullied at school by her peers and at home by her abusive religious mother, Carrie White ([Chloe Grace Moretz](#)) hits her breaking point. After believing she has finally been accepted by her classmates on prom night, she realizes after a cruel prank that she is still only a punch line to them. Soon no one is safe when she decides to unleash her evil telekinetic powers on everyone around her. **AUTHOR:** [Stephen King](#)

GREAT GATSBY, THE (Classic, Love, Prohibition, Literary Adaptation)

By Year

- [2013](#)
- [2012](#)
- [2011](#)
- [2010](#)
- [2009](#)
- [2008](#)
- [2007](#)
- [2006](#)
- [2005](#)
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- [2003](#)
- [2002](#)
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- [2000](#)
- [1999](#)
- [1998](#)

N : 562 movies



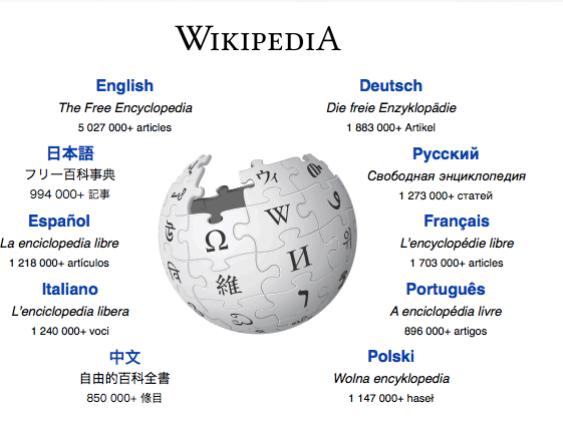
DATA SOURCE

- **WIKIPEDIA**

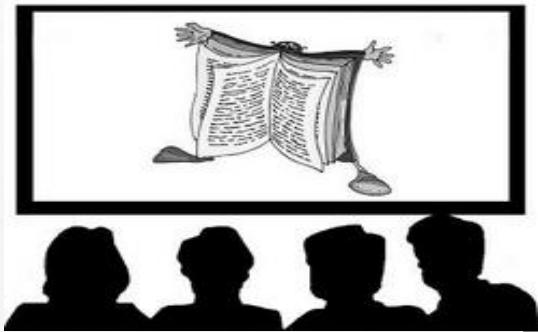
- **LIST OF BEST SELLING AUTHORS TO DATE**
 - SALES OF AT LEAST 100 MILLION BOOKS ARE INCLUDED
- **LIST OF MOVIES ADAPTED FROM COMIC BOOKS**

- **NUMBERS**

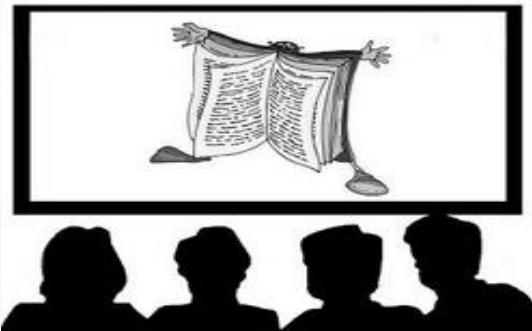
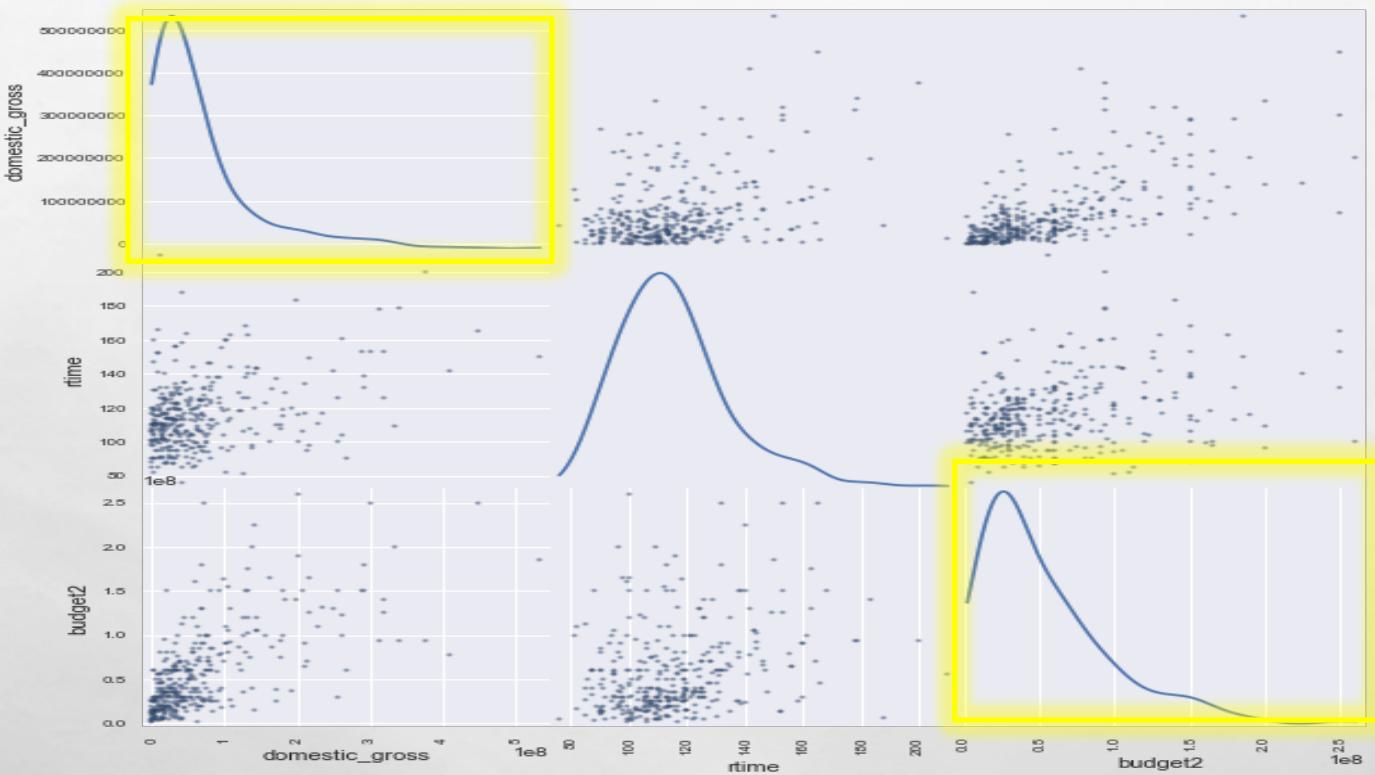
- **NUMBER OF MOVIES BY DISTRIBUTOR 2000-2013**
 - EX: WARNER BROTHERS: 423



N: 186 movies



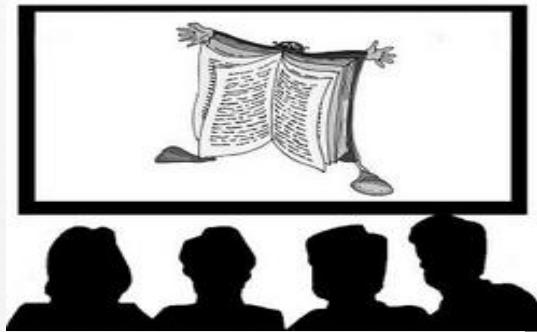
EXPLORATORY ANALYSIS



FEATURE SELECTION

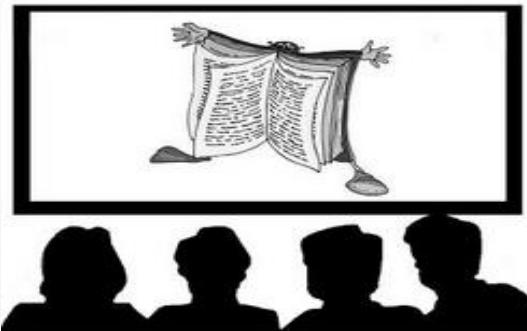
- **CATEGORICAL FEATURES**

- **GENRE: ANIMATION, FANTASY, ACTION**
- **RATING: R AND NOT R**
- **SEASON: HOLIDAY (NOV, DEC), SUMMER (JUNE, JULY, AUGUST)**



FEATURE SELECTION

Domestic Gross = Dependent Variable



	Budget	Run Time	R	Number of Movies*	Season	Genre	Bestselling Author	Comic Books	Adj. R Squared
Model 1	X								0.49
Model 2	X	X							0.53
Model 3	X	X	X						0.55
Model 4	X	X		X					0.56
Model 5	X	X			X				0.59
Model 6	X	X			X	X			0.69
Model 7	X	X			X	X	X	X	0.74

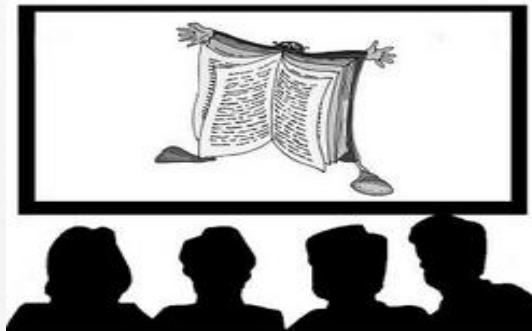
Adjusted R-SQUARED: 0.74: 74% of the variable explained by model

* Number of movies made by distributor between 2000 and 2013

PREDICT DOMESTIC GROSS

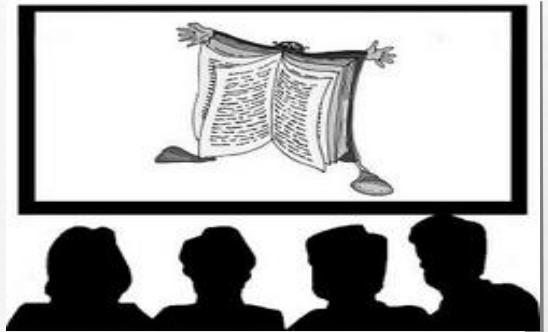
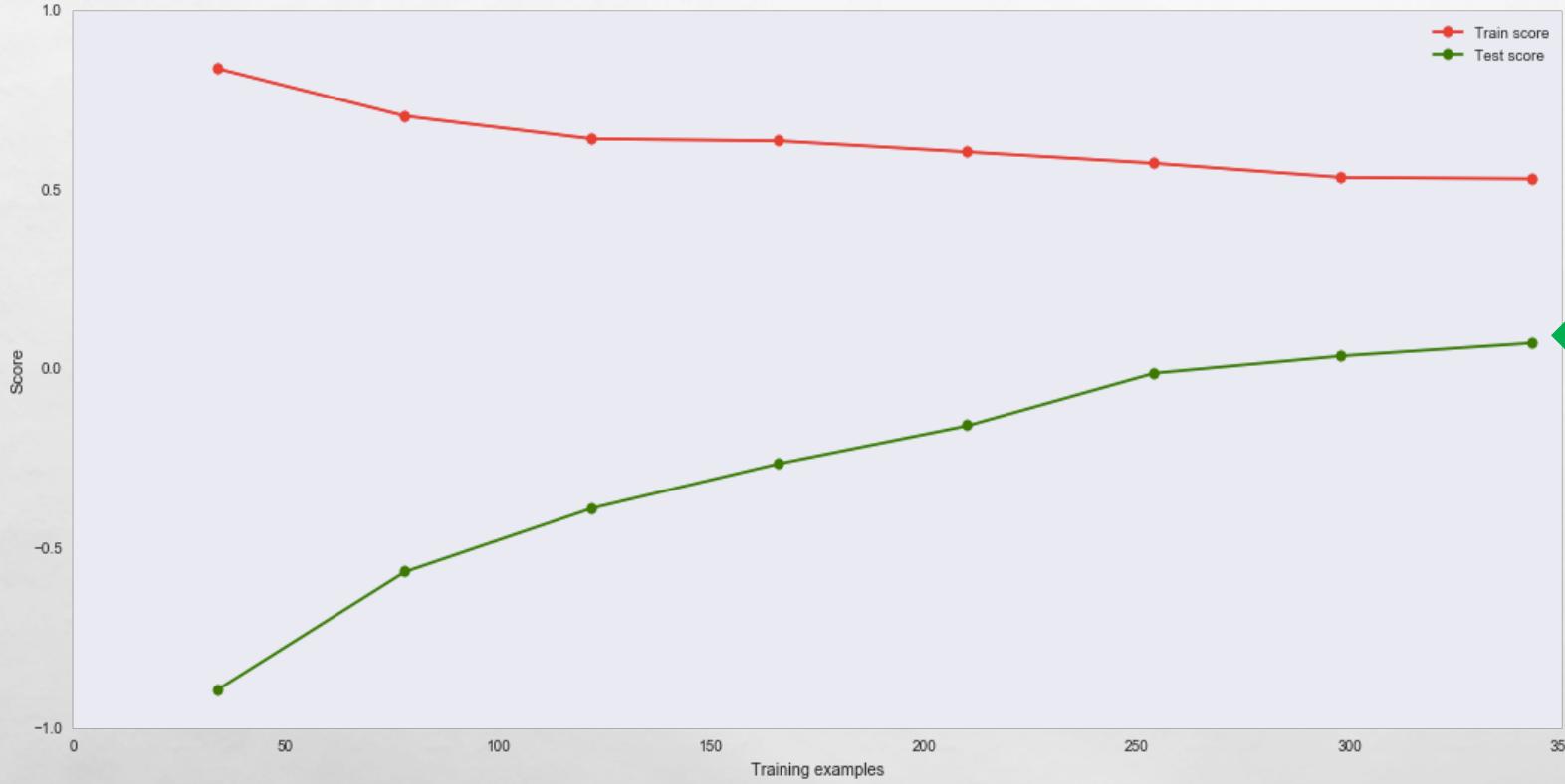
p-value

INDEPENDENT VARIABLE	COEFFICIENT	P-VALUE *
Budget	2.27E+08	0*
Bestselling Author	6.98E+07	0*
Comic Book	6.07E+07	0.008*
Fantasy	5.01E+07	0.013*
Holiday	2.74E+07	0.02*
PG13	1.19E+07	0.195
Action	1.77E+07	0.259
Summer	1.34E+07	0.27
Run Time	-1.23E+07	0.383
Animation	1.41E+07	0.583



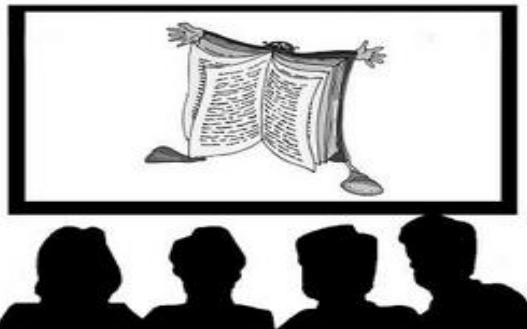
* Significant (<0.05)

PREDICT DOMESTIC GROSS



Training data set: N=111; Test data set: N=75

EXAMPLES:



SIGNIFICANT PREDICTORS

- BUDGET
- BESTSELLING AUTHOR
- COMIC BOOK
- FANTASY
- HOLIDAY



THE HUNGER GAMES: CATCHING FIRE

- BUDGET: \$130 MILLION
- BEST SELLING AUTHOR
- FANTASY
- HOLIDAY: NOVEMBER 22



TWILIGHT: BREAKING DAWN

- BUDGET: \$110 MILLION
- BEST SELLING AUTHOR
- ROMANTIC FANTASY
- HOLIDAY: NOVEMBER 18TH

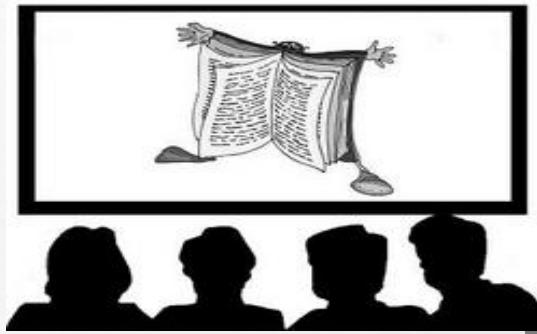


THE GIRL WITH THE DRAGON TATTOO

- BUDGET: \$90 MILLION
- BEST SELLING AUTHOR
- HOLIDAY: DECEMBER 21

NEXT STEPS

- PREDICT NA'S USING REGRESSION
- FIND ADDITIONAL DATA POINTS:
 - NY TIMES BEST SELLERS LIST
 - REVENUE FOR BOOKS
 - REVIEWS FOR BOOKS VS REVIEWS FOR MOVIES



THE END

QUESTIONS?

