# PROJECT LUTHER

Eric Xu

9/19/14
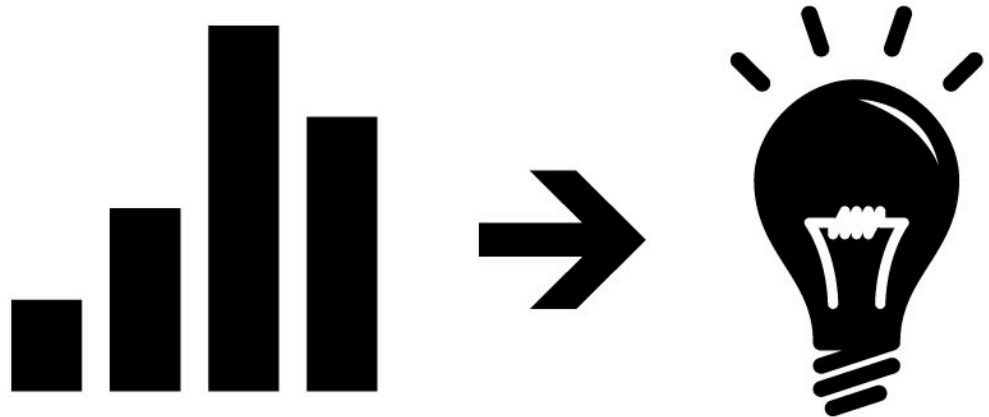
# Client

Horror film producer

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## Horror film producer

- Process of choosing
  - Horror film to produce
  - Studio/Distributor

- Plans to wide release film

# Client's request

Please provide me **insight** as to how I can increase the <u>profit</u> of the horror film I choose to produce.

# Dataset for Analysis

All *horror* genre films from

**BOX OFFICE MOJO**

# Dataset for Analysis

## Dependent Variable?

# Dataset for Analysis

## $$$ ADJUSTED PROFIT $$$

(gross – budget) / (months since film release)
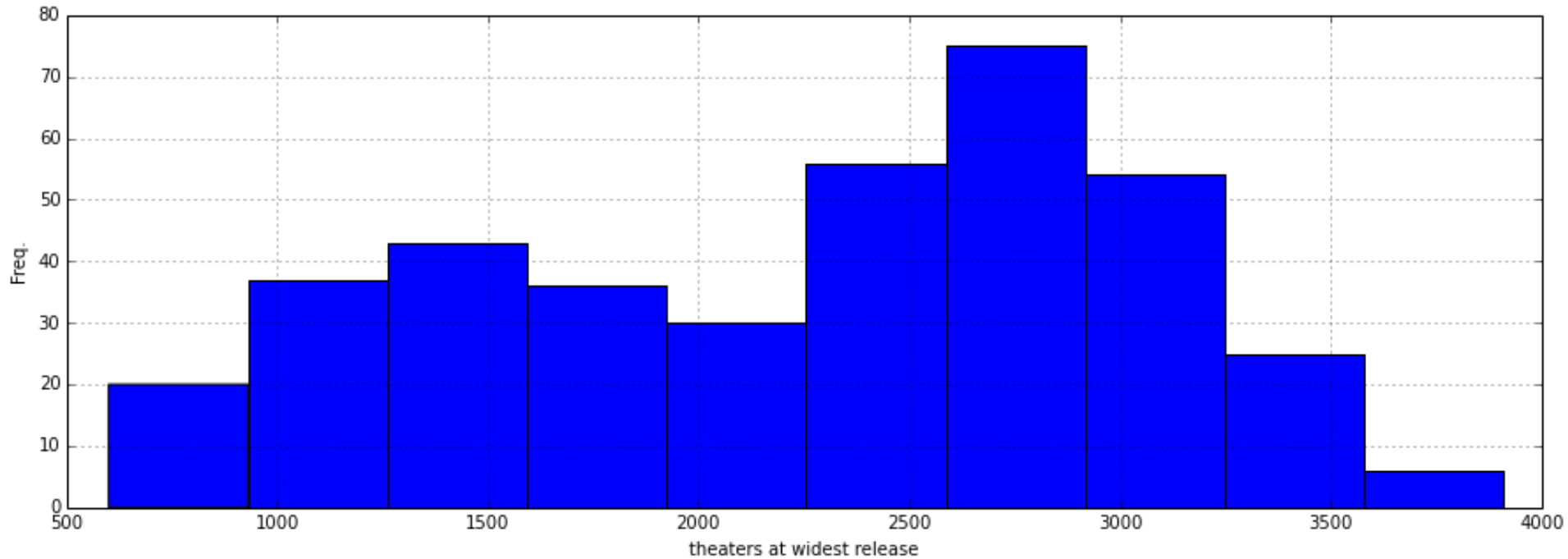
# FEATURES

# # of Theaters Released

# FEATURES

## ≥600 theaters at widest release

# FEATURES

# Month of Release
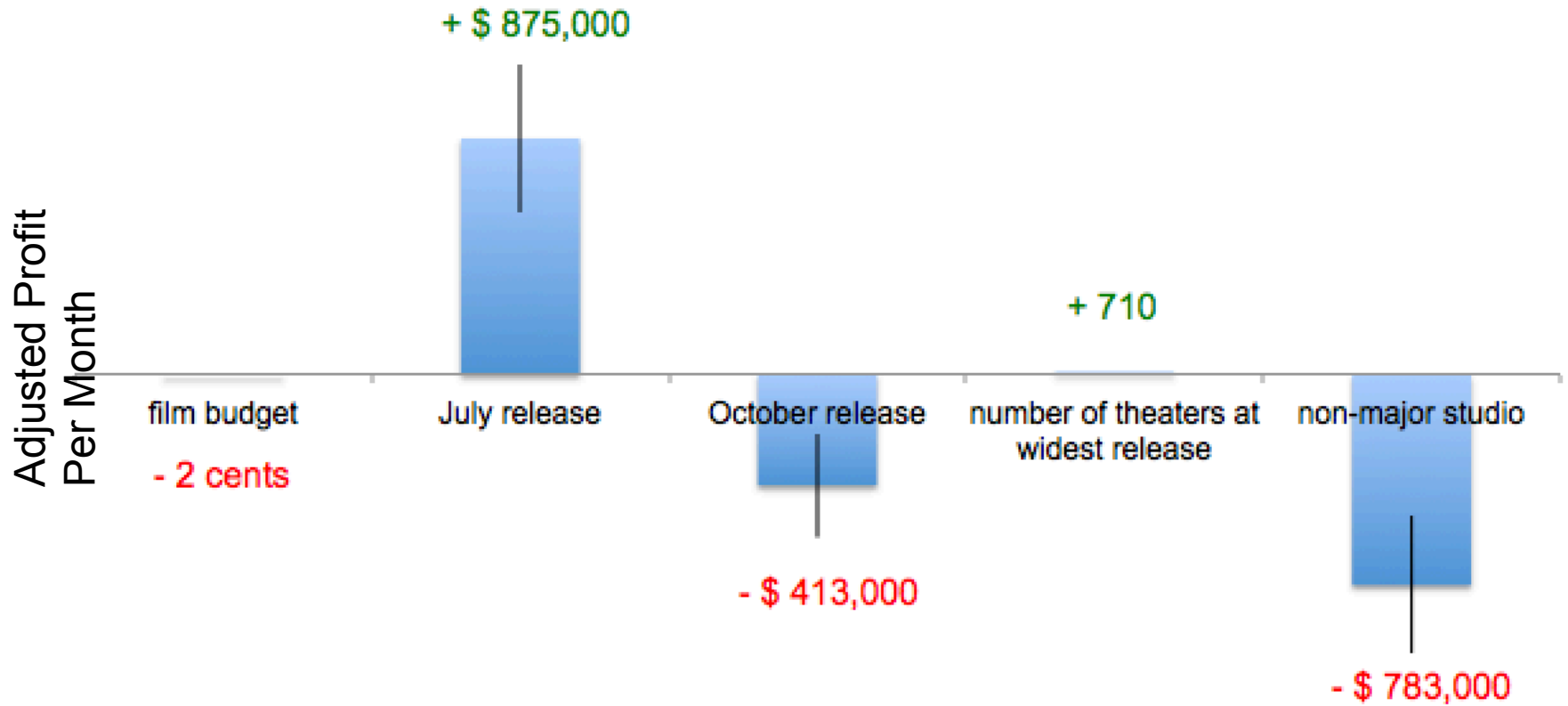
# FEATURES

# Studio/Distributor

# FEATURES

# Runtime

# RESULTS

# INSIGHTS

- **Avoid** releasing around Halloween, release in summer around **July!**

- Choose a **major conglomerate studio,** like **Paramount** 

- Increase number of theaters released if possible, but relatively less important

- Don't worry about **runtime** of movie and film **budget**

| Studio | # of horror movies | MEAN PROFIT (in millions) | MAX PROFIT from a single film (in millions) | MIN PROFIT from a single film (in millions) |
|---|---|---|---|---|
| Paramount | 11 | 39.0 | 102.3 | -35.6 |
| Dimension | 15 | 26.2 | 89.0 | -42.0 |
| Lionsgate | 14 | 25.0 | 83.0 | -19.3 |
| Sony | 41 | 20.9 | 199.2 | -25.0 |
| Warner Bros | 43 | 9.3 | 117.4 | -70.3 |
| Fox | 19 | 8.5 | 67.9 | -31.5 |
| Universal | 19 | 3.8 | 253.0 | -88.0 |

| FEATURE | COEFFICIENT | P-VALUE (<0.05 sig.) |
|---|---|---|
| **Number of theaters** | **+ 21 thousand** | **0.001** |
| January | - 12 million | 0.331 |
| February | - 10 million | 0.334 |
| March | - 8 million | 0.50 |
| **April** | **- 19 million** | **0.05** |
| May | -5 million | 0.666 |
| **June** | **+ 54 million** | **< 0.001** |
| **July** | **+ 14 million** | **0.190** |
| August | - 6 million | 0.438 |
| **September** | **-20 million** | **0.062** |
| October | - 9 million | 0.267 |
| November | - 9 million | 0.468 |
| **December** | **+ 24 million** | **0.117** |

| MONTH | # of horror movies | MEAN PROFIT (in millions) | MAX PROFIT from a single film (in millions) | MIN PROFIT from a single film (in millions) |
|---|---|---|---|---|
| June | 10 | + 64.7 | + 253.0 | − 31.5 |
| July | 15 | + 36.9 | + 138.0 | − 12.7 |
| October | 39 | + 27.9 | + 100.4 | − 33.2 |
| December | 7 | + 27.8 | + 106.4 | − 38.5 |
| August | 29 | + 19.5 | + 253.5 | − 64.9 |
| January | 12 | + 14.8 | + 56.6 | − 61.0 |
| April | 21 | + 14.2 | + 46.2 | − 42.0 |
| September | 15 | + 9.9 | + 78.6 | − 22.7 |
| February | 15 | + 9.2 | + 49.1 | − 88.0 |
| March | 12 | + 8.0 | + 33.0 | − 19.3 |
| May | 11 | + 1.3 | + 67.9 | − 70.3 |
| November | 10 | − 0.3 | + 45.3 | − 27.2 |

| Studio | # | Average Domestic Total Gross of all Films (in millions) | Highest Domestic Total Gross Film (in millions) | Lowest Domestic Total Gross Film (in millions) |
|---|---|---|---|---|
| Sony | 66 | 30.0 | 229.2 | 3.8 |
| Warner Bros | 64 | 32.6 | 256.4 | 3.8 |
| Universal | 48 | 23.9 | 260.0 | 2.1 |
| Fox | 40 | 22.4 | 85.2 | 2.1 |
| Lionsgate | 31 | 29.3 | 140.5 | 3.1 |
| Paramount | 26 | 39.4 | 234.3 | 12.9 |
| MGM | 25 | 24.6 | 86.4 | 5.3 |
| Dimension | 21 | 33.7 | 110.0 | 12.8 |
| Relativity | 15 | 17.0 | 52.6 | 7.7 |
| Buena Vista | 12 | 33.5 | 293.5 | 3.3 |
| DreamWorks | 7 | 103.3 | 155.5 | 76.2 |
| Miramax | 6 | 49.8 | 157.0 | 5.7 |
| Freestyle | 5 | 8.0 | 16.3 | 1.2 |
| Atlantic | 3 | 15.6 | 33.1 | 7.9 |

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# Model against predictions
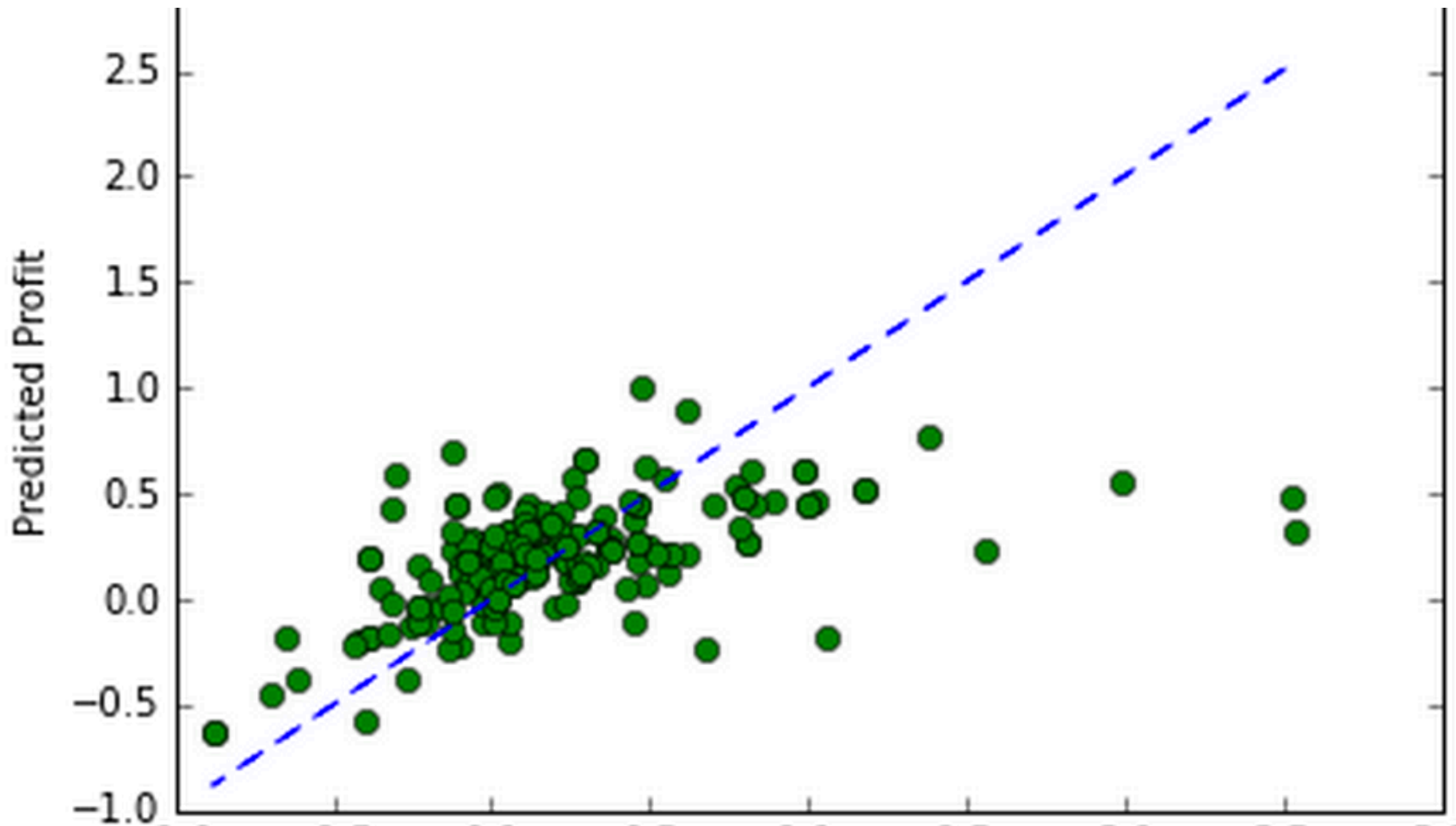
| FEATURE | COEFFICIENT | P-VALUE (<0.05 sig.) |
|---|---|---|
| **Number of theaters** | **+ 26 thousand** | **< 0.001** |
| **January** | **- 14 million** | **0.020** |
| February | - 6 million | 0.308 |
| March | - 13 million | 0.050 |
| **April** | **- 13 million** | **0.027** |
| May | + 924 thousand | 0.901 |
| **June** | **+ 35 million** | **< 0.001** |
| **July** | **+ 14 million** | **0.017** |
| August | - 5 million | 0.295 |
| **September** | **+ 15 million** | **0.020** |
| October | - 8 million | 0.099 |
| November | - 2 million | 0.835 |
| **December** | **+ 9 million** | **0.002** |

| Average Domestic Total Gross of all Films (in millions) | Highest Domestic Total Gross Film (in millions) | Lowest Domestic Total Gross Film (in millions) |
| --- | --- | --- |
| 40.3 | 260.0 | 3.7 |
| 35.2 | 129.1 | 5.8 |
| 32.4 | 157.0 | 2.6 |
| 27.5 | 120.2 | 11.8 |
| 27.4 | 293.5 | 3.3 |
| 25.7 | 128.0 | 1.3 |
| 23.8 | 71.6 | 5.7 |
| 23.5 | 105.3 | 6.3 |
| 23.3 | 76.2 | 2.1 |
| 22.9 | 90.7 | 1.2 |