



**Microsoft**  
Productions

*An Academic Data Analysis Project by Devin Sarnataro*

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## Data Sources

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OpusData

**THE NUMBERS®**

# Category Types

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- **IMDb Category Types**

- **Unique Genre Combinations**

- Number of Different Combinations: 183

- **Individual Genres**

- Action

- Adventure

- Animation

- Biography

- Comedy

- Crime

- Documentary

- Drama

- Family

- Fantasy

- History

- Horror

- Music

- Musical

- Mystery

- Romance

- Sci-Fi

- Sport

- Thriller

- War

- Western

# Category Types

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## ➤ **OpusData Category Types**

### ➤ **Genres**

- Adventure
- Action
- Drama
- Musical
- Comedy
- Horror

- Thriller/Suspense
- Romantic Comedy
- Black Comedy
- Western
- Concert/Performance

### ➤ **Creative Types**

- Kids Fiction
- Contemporary Fiction
- Historical Fiction
- Science Fiction
- Fantasy

- Dramatization
- Super Hero
- Factual
- Multiple Creative Types

# Important Financial Metrics

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Total Worldwide Gross Revenue

Average Worldwide Gross Revenue

Total Worldwide Profits

Average Worldwide Profits

# IMDb Category Types

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## Standards for Qualifying as an Important Unique Genre Combination

- For a unique genre combination to even be considered as an Important Unique Genre Combination for a metric, there had to have been **at least three movies made** with that specific genre combination within the period covered.
- If a genre combination's value was in the **Top 10** of all of the genre combinations for a metric, it was considered a financially important genre combination for that metric.

## Standards for Qualifying as an Important Individual Genre

- For an individual genre to even be considered as an Important Individual Genre, there had to have been **at least nine movies made** that included that individual genre in their 'genres' description within the period covered.
- If an individual genre's value was in the **Top 25%** of all of the individual genres for a metric, it was considered a financially important individual genre for that metric.

# OpusData Category Types

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## Standards for Qualifying as an Important Genre

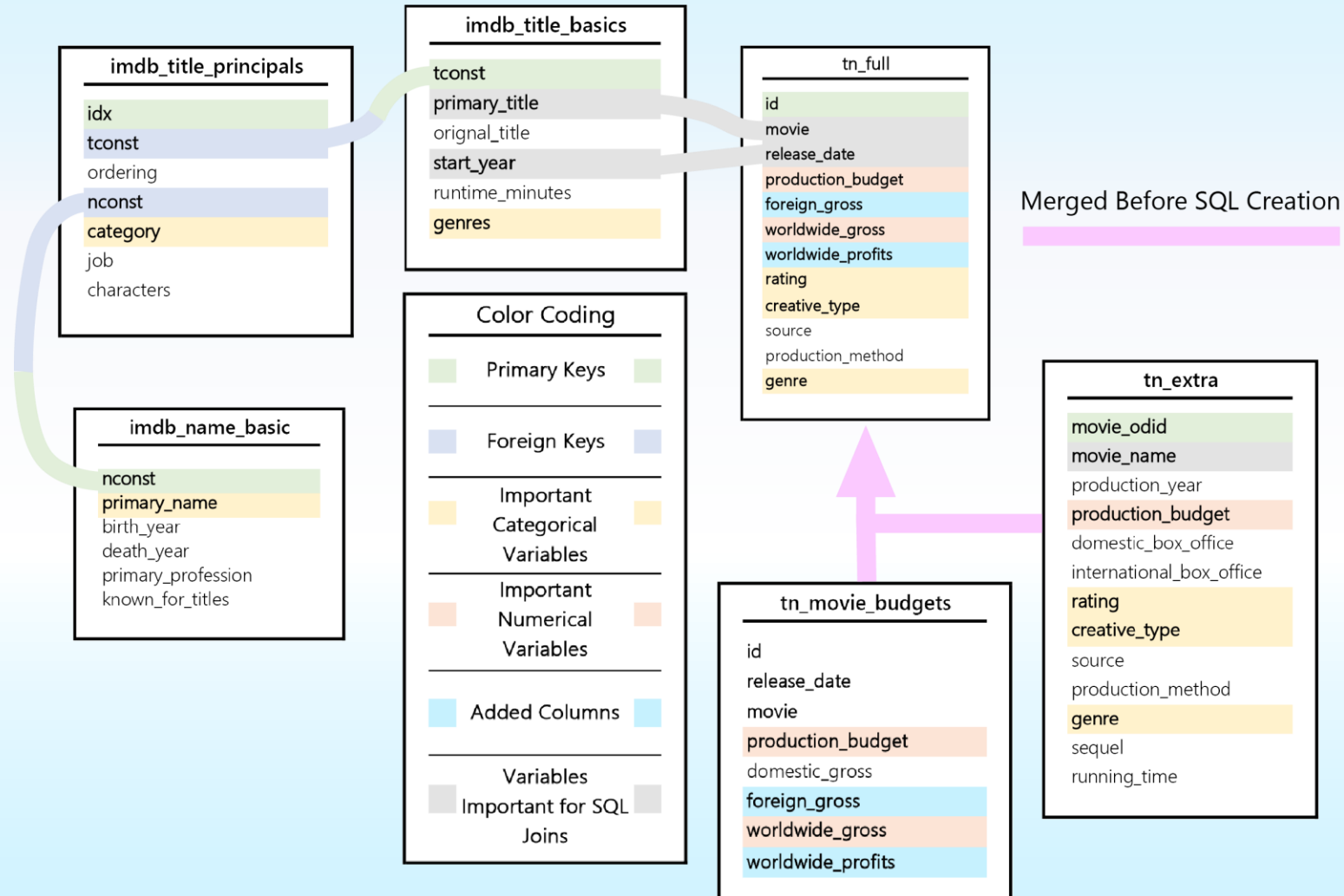
- For an genre to even be considered as an Important Genre, there had to have been **at least nine movies made** with that genre within the period covered.
- If a genre's value was in the **Top 25%** of all of the genres for a metric, it was considered a financially important genre for that metric.

## Standards for Qualifying as an Important Creative Type

- For a creative type to even be considered as an Important Creative Type, there had to have been **at least nine movies made** with that creative type within the period covered.
- If a creative type's value was in the **Top  $\frac{1}{3}^{rd}$**  of all of the creative types for a metric, it was considered a financially important creative type for that metric.



# SQL Database Diagram



# **Financially Important Unique Genre Combinations**

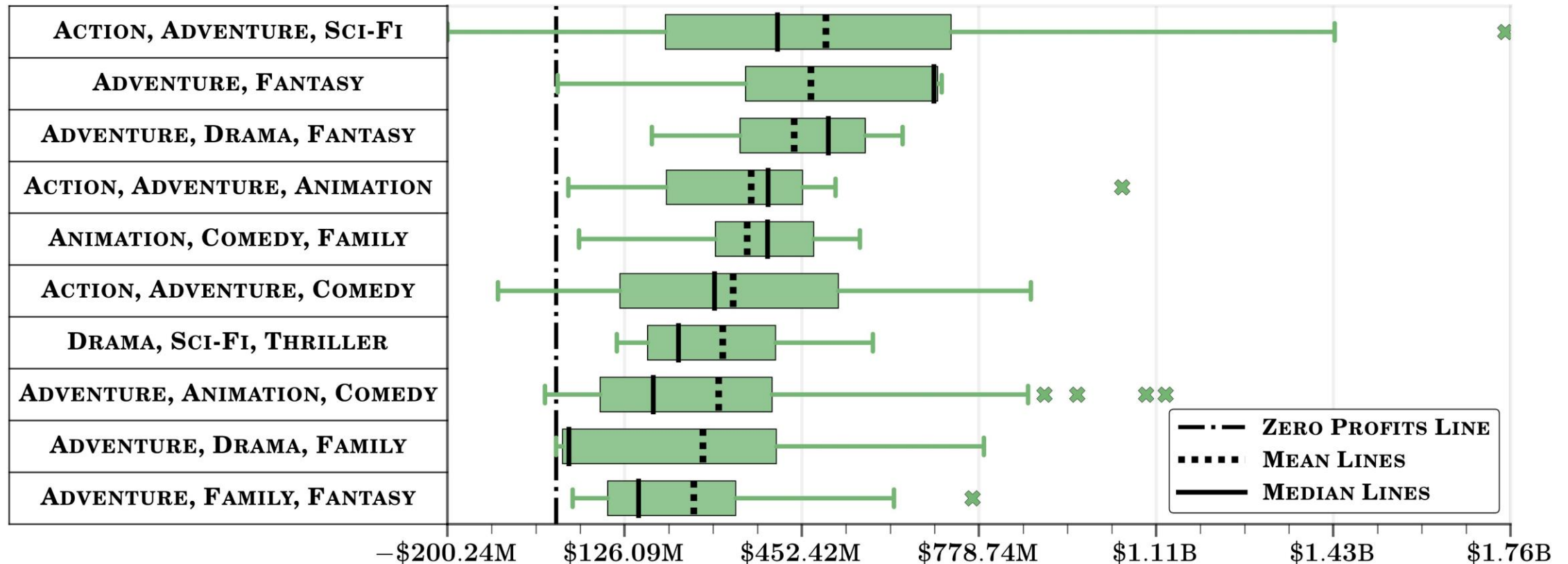
# IMDb CATEGORICAL DATA • THE NUMBERS FINANCIAL DATA 2010 → 2019

*Top 10 Unique Genre Combinations • Ranked by Boxplots of the Worldwide Profits*

*Ranked by Average Worldwide Profits*

*Boxplots of the Worldwide Profits of Movies with these Unique Genre Combinations*

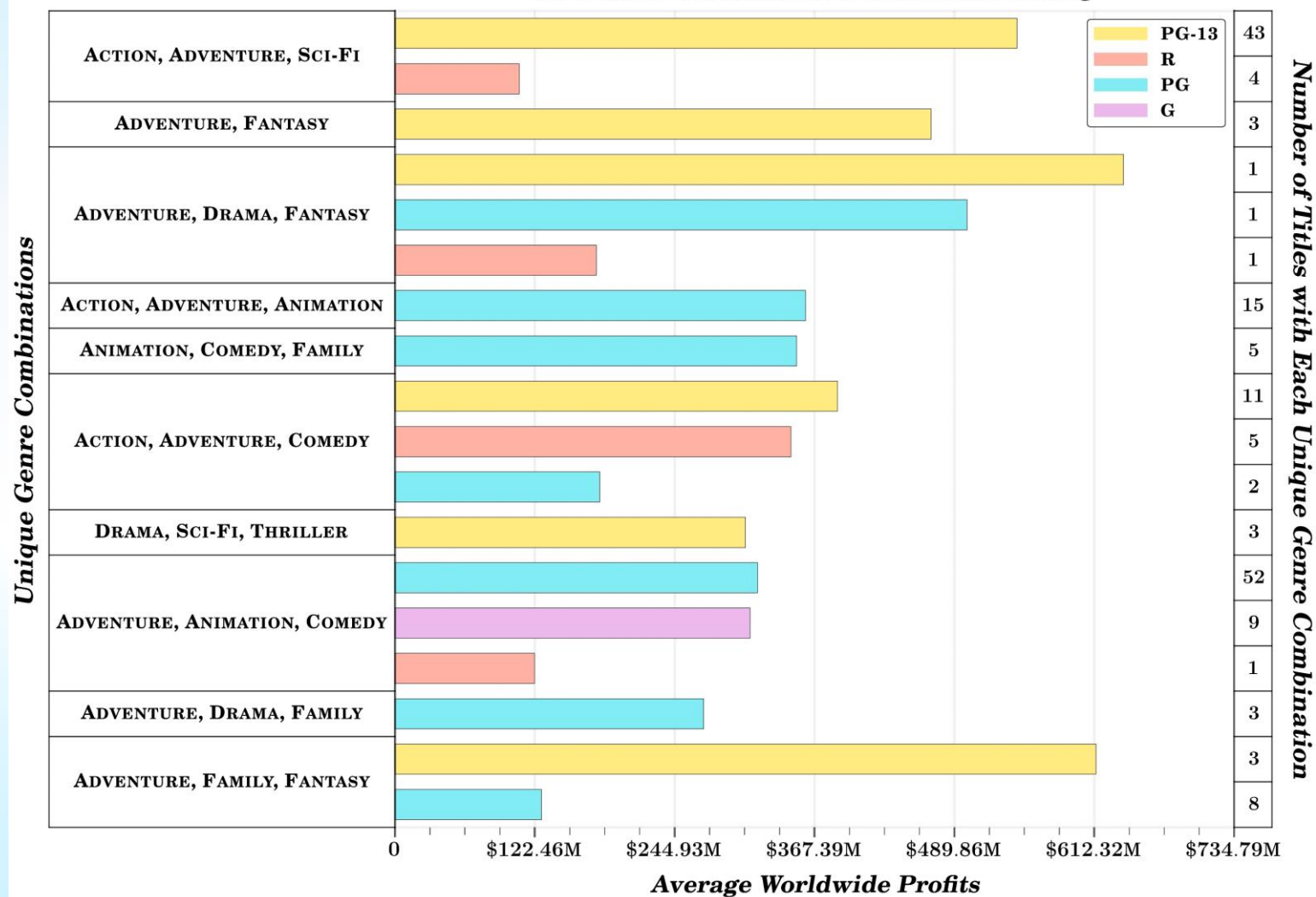
*Unique Genre Combinations*



*Worldwide Profits*

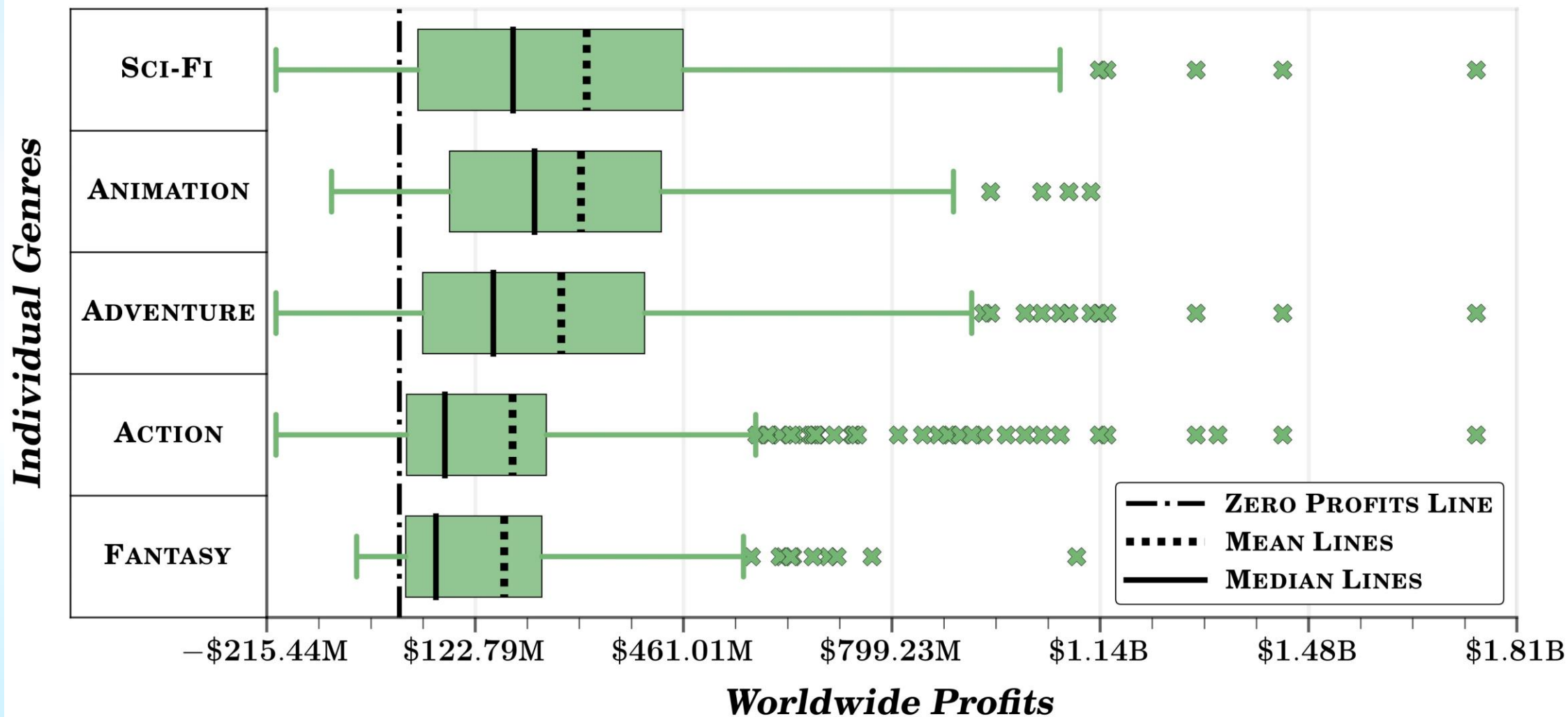
**IMDb CATEGORICAL DATA**  
**OPUSDATA RATINGS DATA • THE NUMBERS FINANCIAL DATA**  
 2010 → 2018

*Average Worldwide Profits of Movies with  
 Each Genre Combination with each MPA Rating*



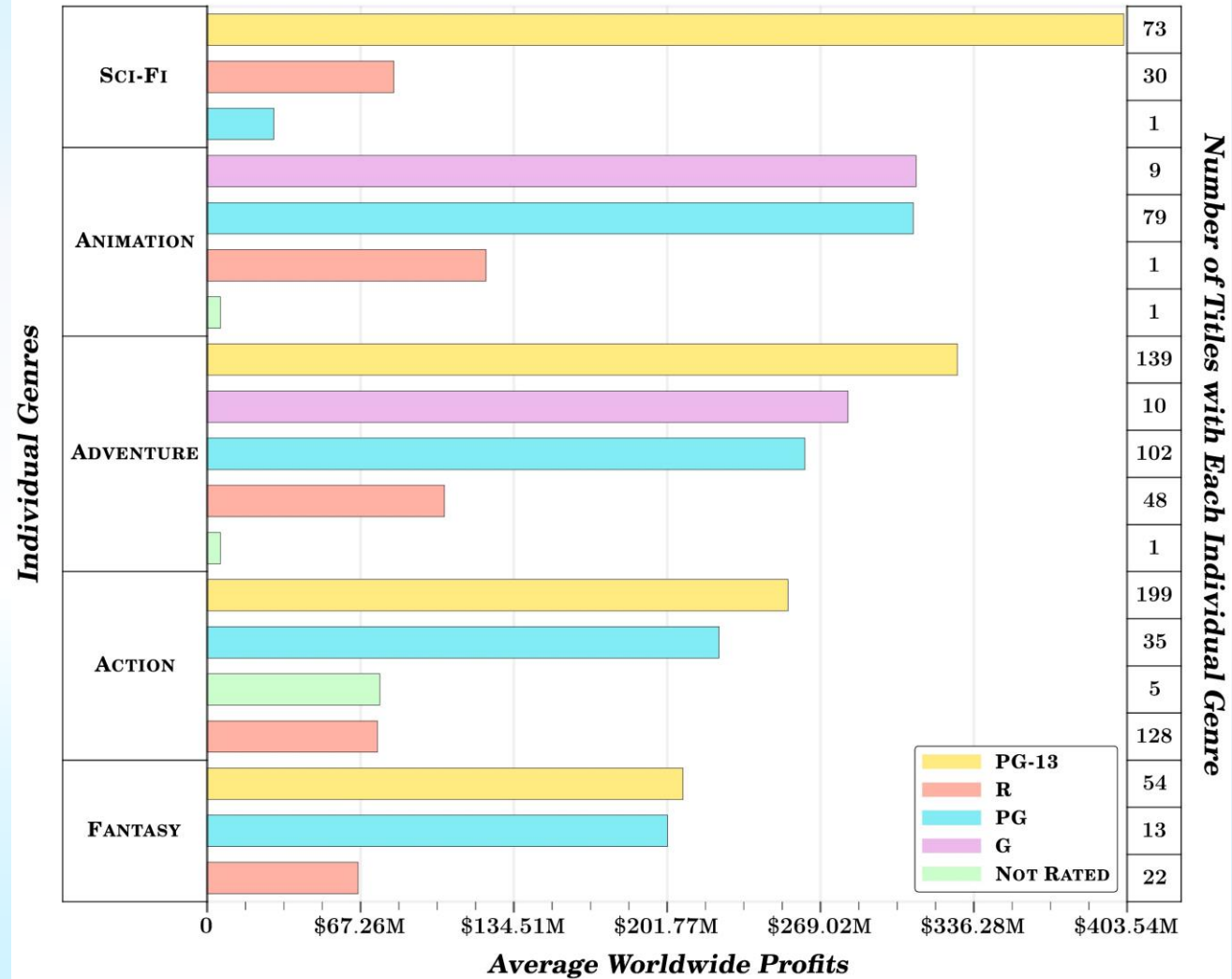
# **Financially Important Individual Genres**

### Boxplots of the Worldwide Profits of Movies that Included each Individual Genre



**IMDb CATEGORICAL DATA**  
**OPUSDATA RATINGS DATA • THE NUMBERS FINANCIAL DATA**  
 2010 → 2018

*Average Worldwide Profits of Movies that  
 Included each Individual Genre with each MPA Rating*



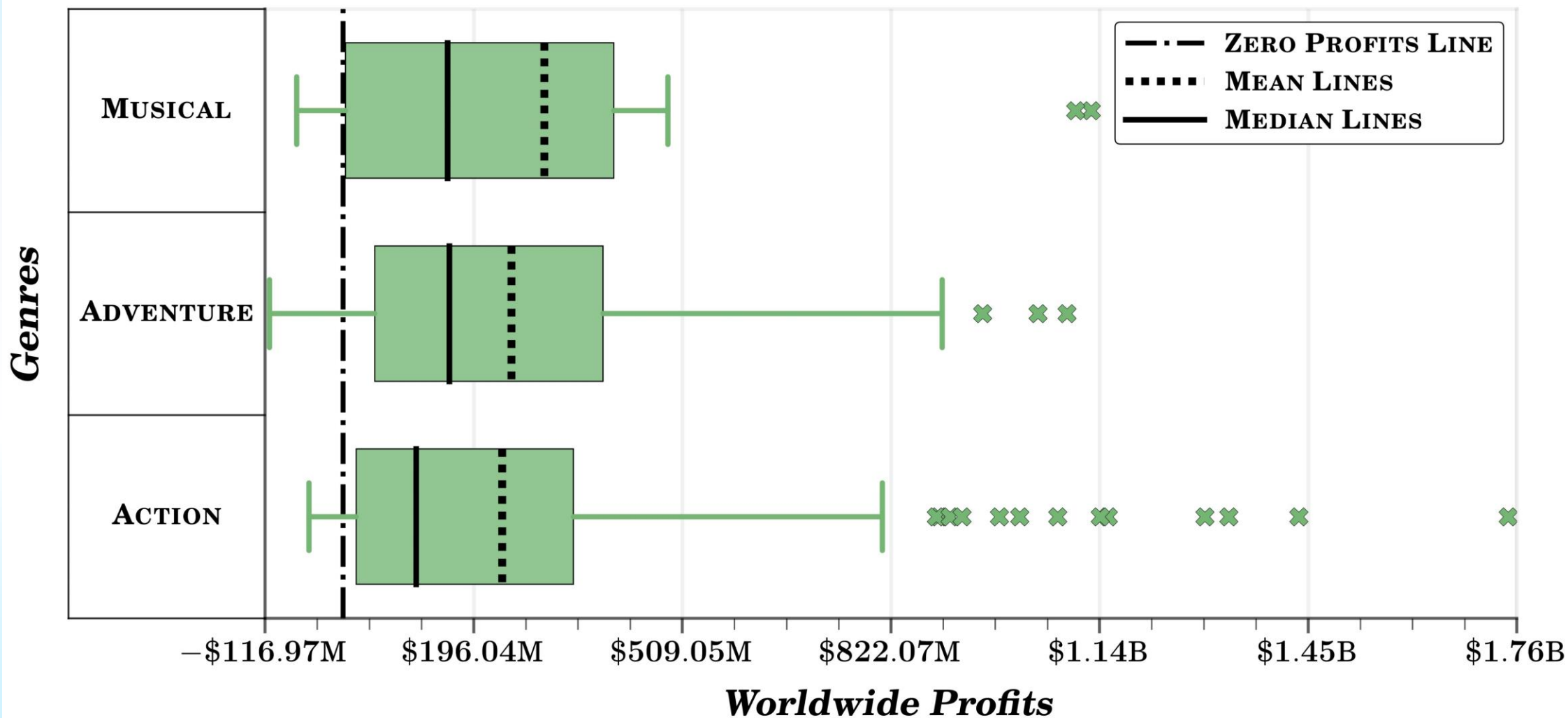
# **Financially Important Genres**



# OPUSDATA CATEGORICAL DATA • THE NUMBERS FINANCIAL DATA

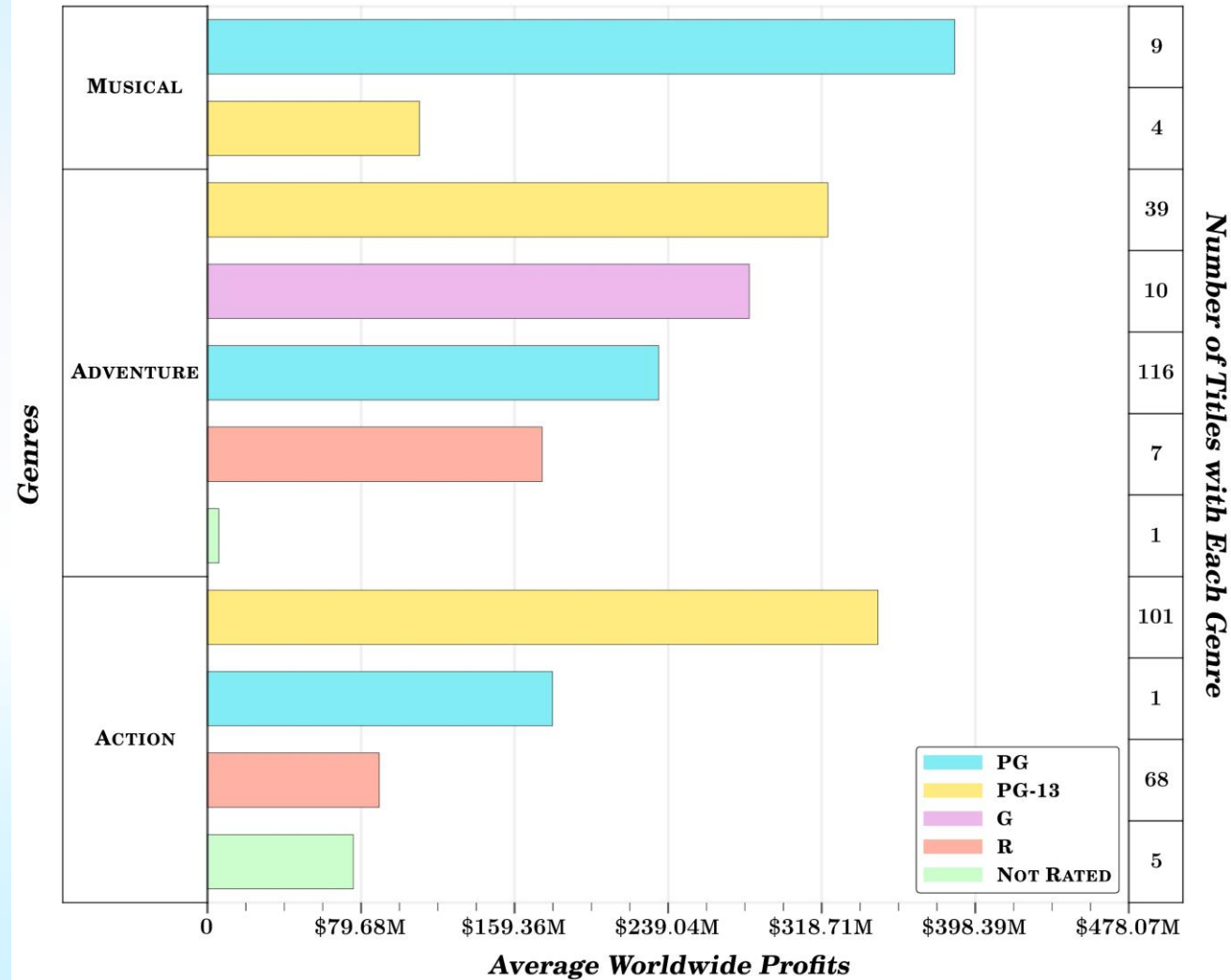
## 2010 → 2018

*Boxplots of the Worldwide Profits of Movies with each Genre*



**OPUSDATA CATEGORICAL DATA**  
**OPUSDATA RATINGS DATA • THE NUMBERS FINANCIAL DATA**  
 2010 → 2018

*Average Worldwide Profits of Movies with  
 Each Genre with each MPA Rating*

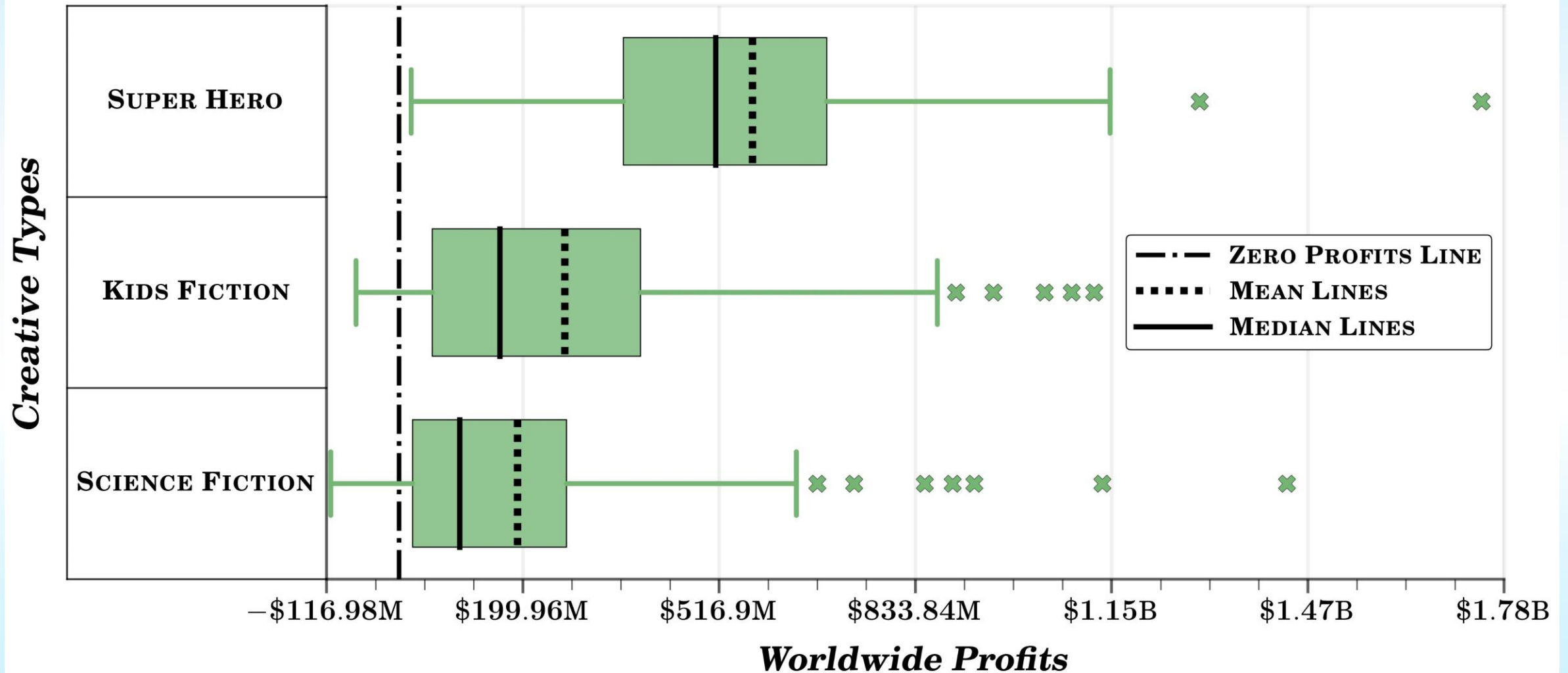


# **Financially Important Creative Types**

# OPUSDATA CATEGORICAL DATA • THE NUMBERS FINANCIAL DATA

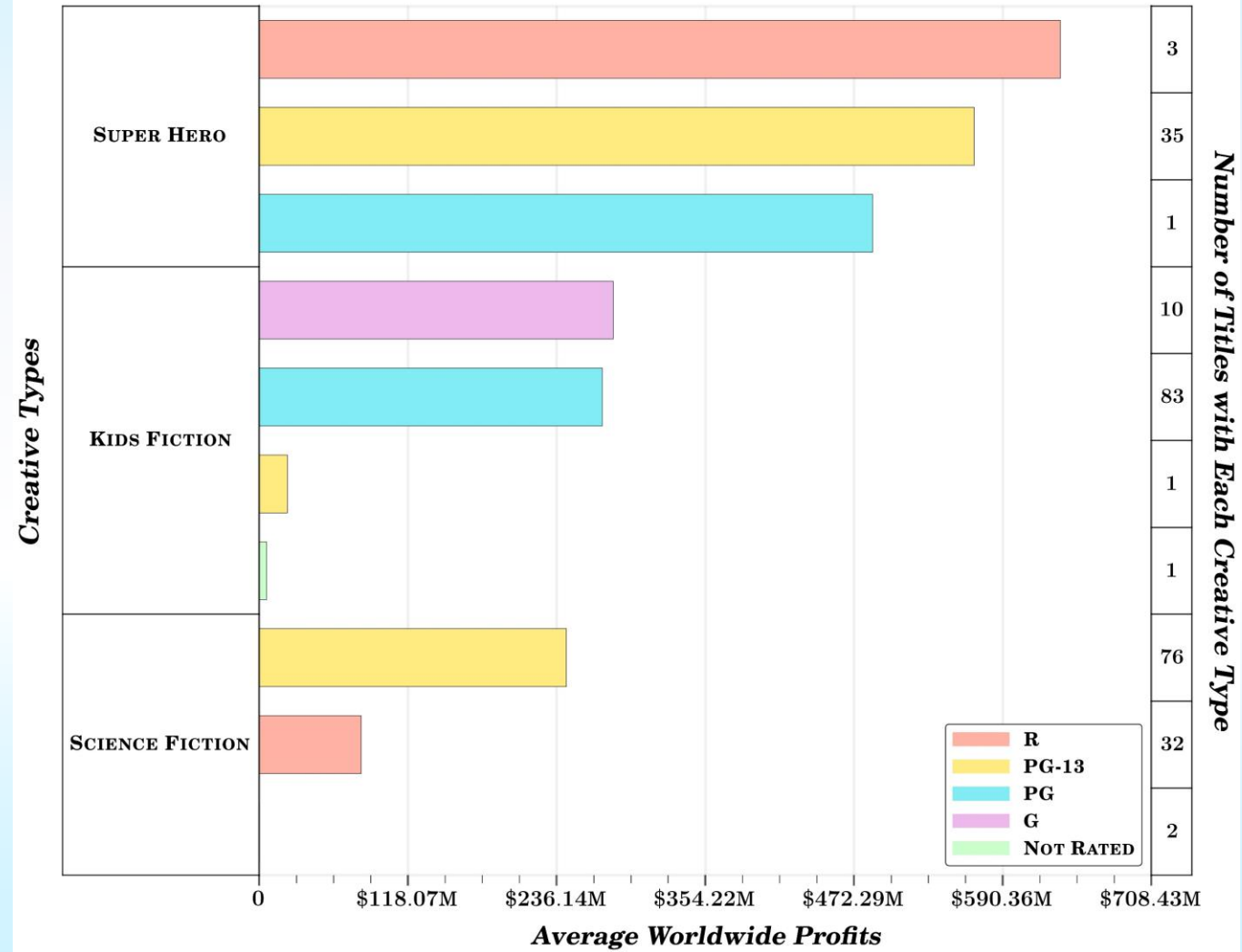
## 2010 → 2018

*Boxplots of the Worldwide Profits of Movies with each Creative Type*



**OPUSDATA CATEGORICAL DATA**  
**OPUSDATA RATINGS DATA • THE NUMBERS FINANCIAL DATA**  
 2010 → 2018

*Average Worldwide Profits of Movies that  
 Each Creative Type with each MPA Rating*



# Recommendations to Maximize Subscribers

## Total Worldwide Gross Revenue

IMDb Category Types	Recommended Categories (In order of Importance)	Recommended MPA Ratings for each Category (In order of Importance for each Category)
Unique Genre Combinations	Action, Adventure, Sci-Fi	PG-13
	Action, Adventure, Animation	PG
	Adventure, Family, Fantasy	PG-13 • PG
	Adventure, Animation, Comedy	PG • G
	Action, Adventure, Fantasy	PG-13
Individual Genres	Action, Adventure, Comedy	PG-13 • R
	Sci-Fi	PG-13
	Adventure	PG-13 • PG
	Action	PG-13 • R • PG
	Comedy	PG • PG-13 • R
OpusData Category Types	Drama	PG-13 • R
	Recommended Categories (In order of Importance)	Recommended MPA Ratings for each Category (In order of Importance for each Category)
	Adventure	PG • PG-13
	Action	PG-13 • R
	Drama	PG-13 • R
Creative Types	Kids Fiction	PG • G
	Science Fiction	PG-13 • R
	Contemporary Fiction	PG-13 • R

## Average Worldwide Gross Revenue

IMDb Category Types	Recommended Categories (In order of Importance)	Recommended MPA Ratings for each Category (In order of Importance for each Category)
Unique Genre Combinations	Action, Adventure, Sci-Fi	PG-13 • R
	Adventure, Fantasy	PG-13
	Action, Adventure, Animation	PG
	Animation, Comedy, Family	PG
	Adventure, Drama, Fantasy	PG-13 • PG-13 • R
Individual Genres	Adventure, Family, Fantasy	PG-13 • PG
	Sci-Fi	PG-13 • R
	Animation	G • PG • R
	Adventure	PG-13 • G • PG • R
	Fantasy	PG-13 • PG • R
OpusData Category Types	Action	PG-13 • PG • R
	Recommended Categories (In order of Importance)	Recommended MPA Ratings for each Category (In order of Importance for each Category)
	Musical	PG • PG-13
	Adventure	PG-13 • G • PG • R
	Action	PG-13 • PG • R
Creative Types	Super Hero	PG-13 • R • PG
	Kids Fiction	G • PG • PG-13
	Science Fiction	PG-13 • R • PG

# Recommendations to Maximize Profits

## Total Worldwide Profits

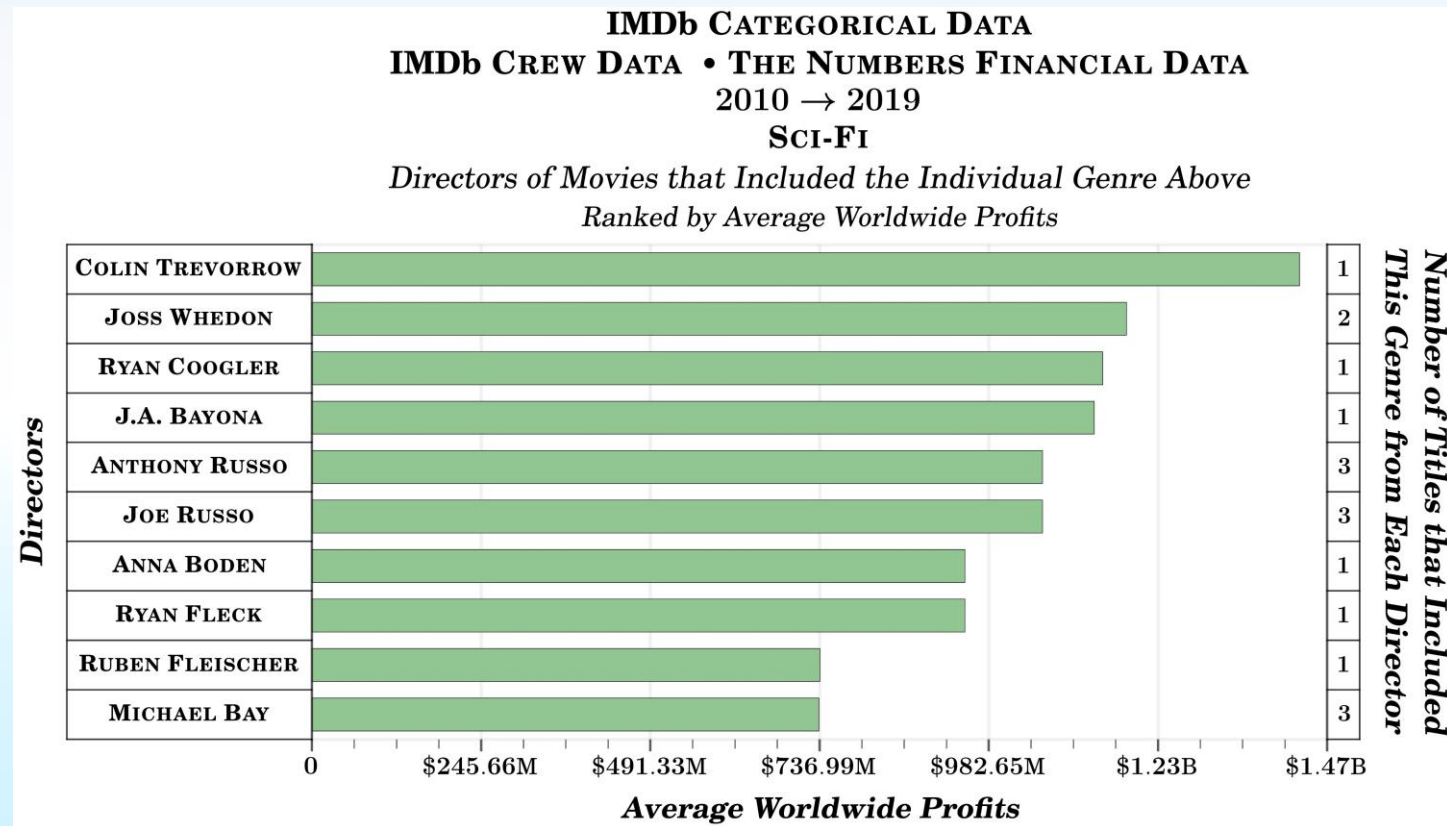
IMDb Category Types	Recommended Categories (In order of Importance)	Recommended MPA Ratings for each Category (In order of Importance for each Category)
Unique Genre Combinations	Action, Adventure, Animation	PG
	Adventure, Animation, Comedy	PG • G
	Action, Adventure, Comedy	PG-13 • R
	Adventure, Family, Fantasy	PG-13 • PG
	Action, Adventure, Fantasy	PG-13
	Action, Adventure, Sci-Fi	PG-13
Individual Genres	Sci-Fi	PG-13
	Adventure	PG-13 • PG
	Action	PG-13 • R • PG
	Comedy	PG • PG-13 • R
	Drama	PG-13 • R
OpusData Category Types	Recommended Categories (In order of Importance)	Recommended MPA Ratings for each Category (In order of Importance for each Category)
Genres	Action	PG-13 • R
	Adventure	PG • PG-13
	Drama	PG-13 • R
Creative Types	Super Hero	PG-13
	Kids Fiction	PG • G
	Contemporary Fiction	PG-13 • R

## Average Worldwide Profits

IMDb Category Types	Recommended Categories (In order of Importance)	Recommended MPA Ratings for each Category (In order of Importance for each Category)
Unique Genre Combinations	Adventure, Drama, Fantasy	PG-13 • PG • R
	Adventure, Fantasy	PG-13
	Animation, Comedy, Family	PG
	Drama, Sci-Fi, Thriller	PG-13
	Action, Adventure, Animation	PG
	Adventure, Family, Fantasy	PG-13 • PG
	Adventure, Animation, Comedy	PG • G • R
	Action, Adventure, Sci-Fi	PG-13
Individual Genres	Animation	G • PG • R
	Sci-Fi	PG-13 • R
	Adventure	PG-13 • G • PG • R
	Fantasy	PG-13 • PG • R
	Action	PG-13 • PG • R
OpusData Category Types	Recommended Categories (In order of Importance)	Recommended MPA Ratings for each Category (In order of Importance for each Category)
Genres	Adventure	PG-13 • G • PG • R
	Action	PG-13 • PG • R
	Musical	PG • PG-13
Creative Types	Super Hero	R • PG-13 • PG
	Kids Fiction	G • PG
	Science Fiction	PG-13 • R

# Interactive Visualization Feature

My final recommendation is to use the feature that starts on the next slide to find the most important crew members of the categories from each category type that I recommended in the previous slides, or to explore the category types themselves. An example visualization is shown below.





# Interactive Visualization Feature

---

Click on and follow the instructions for each menu as they appear to choose the properties of the visualization you wish to create. Then click the 'Access Visualization' button once you have selected the desired visualization.

Choose a data source from the choices below...

IMDb

OpusData

# Interactive Visualization Feature

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Click on and follow the instructions for each menu as they appear to choose the properties of the visualization you wish to create. Then click the 'Access Visualization' button once you have selected the desired visualization.

IMDb

Choose a category type from the choices below...

Important Unique Genre Combinations

Important Individual Genres

# Interactive Visualization Feature

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Click on and follow the instructions for each menu as they appear to choose the properties of the visualization you wish to create. Then click the 'Access Visualization' button once you have selected the desired visualization.

IMDb

Important Individual Genres

Do you wish to explore the Important Individual Genres themselves,  
or the Important Crew from those Important Individual Genres?

Important Individual Genres

Important Individual Genres - Crew

# Interactive Visualization Feature

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Click on and follow the instructions for each menu as they appear to choose the properties of the visualization you wish to create. Then click the 'Access Visualization' button once you have selected the desired visualization.

IMDb

Important Individual Genres

Important Individual Genres

Choose a financial metric from the choices below...

Total Worldwide Gross

Total Worldwide Profits

Average Worldwide Gross

Average Worldwide Profits

# Interactive Visualization Feature

---

Click on and follow the instructions for each menu as they appear to choose the properties of the visualization you wish to create. Then click the 'Access Visualization' button once you have selected the desired visualization.

IMDb

Important Individual Genres

Important Individual Genres

Average Worldwide Profits

Click on the list below to make the appropriate visualizations appear.  
Choose one and then press the button on the right.

Access Visualization

# Interactive Visualization Feature

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Click on and follow the instructions for each menu as they appear to choose the properties of the visualization you wish to create. Then click the 'Access Visualization' button once you have selected the desired visualization.

OpusData

Important Genres

Important Genres - Crew

Directors

Total Worldwide Gross

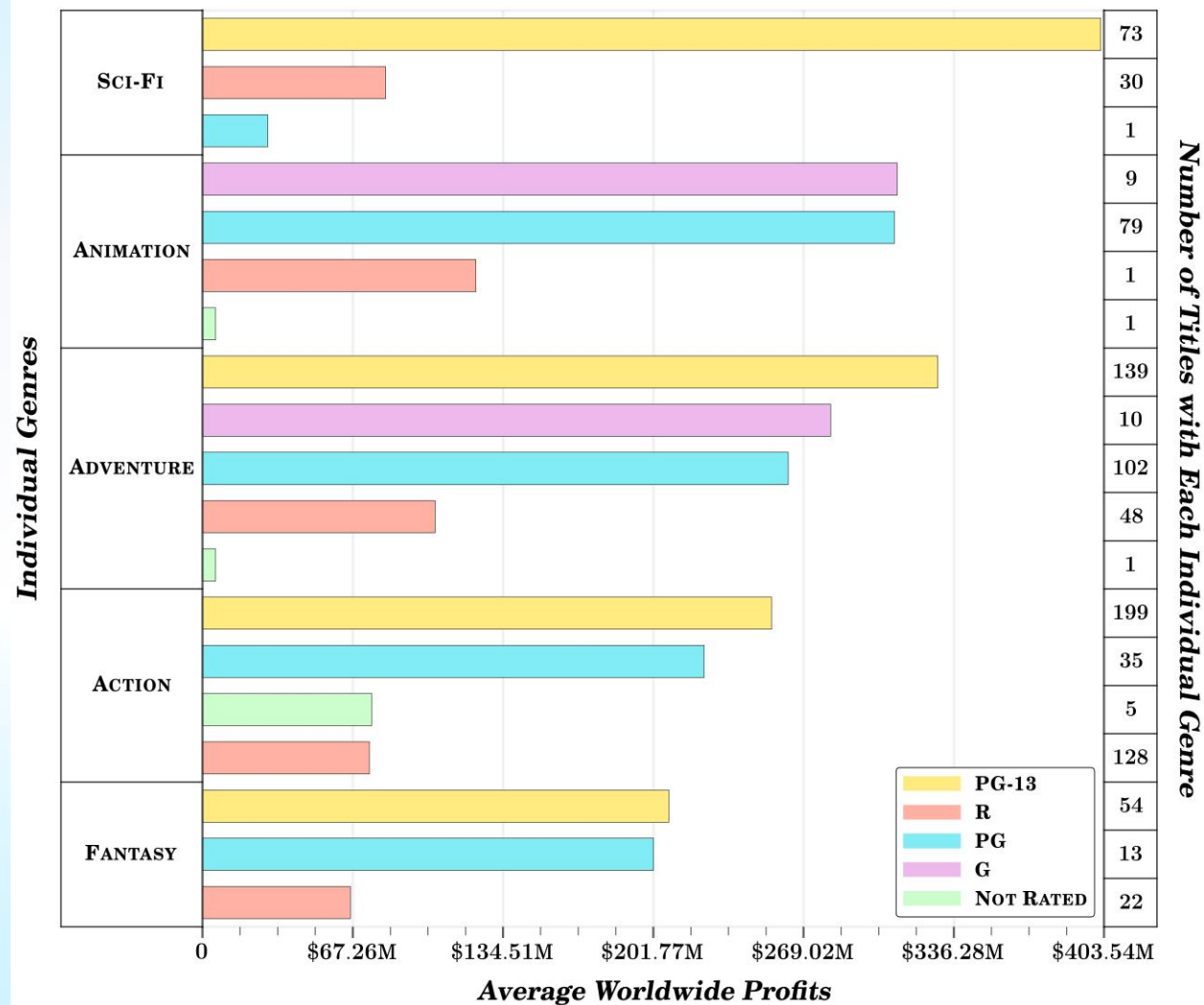
Click on the list below to make the appropriate visualizations appear.  
Choose one and then press the button on the right.

Access Visualization

*Use the arrow keys on the scroll bar or the directional keys on your keyboard to navigate through the list if necessary.*

**IMDb CATEGORICAL DATA**  
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 2010 → 2018

*Average Worldwide Profits of Movies that  
 Included each Individual Genre with each MPA Rating*



**Start Again**

**Continue**

# Future Investigations

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Rotten Tomatoes

Critics Reviews

Tomatometer

The Numbers / OpusData



# Thank You & Contact Information

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- Critical Insights and Recommendations
- Financial Benefits for Microsoft
- Benefits for Enthusiasts of High Quality Films and Television
- Click on an Icon Below for Contact Information



**Devin Sarnataro**

