# SO YOU WANNA GET INTO GAMES?

Breaking into the video game industry is difficult. Which games will sell, and which games will flop? It's hard to know what will stick. Our goal is to help streamline the process of which video games are more likely to reach more viewers and get more gameplay and therefore make more profit.


## Trevor Bridges

Trevor collected the Triforce as Link, saved a princess or two as Mario and Luigi, and fought in space as a Battletoad on his Nintendo and Super Nintendo. He didn't truly fall in love with video games, specifically FPS games, until 1997 on his N64. Trevor amassed copious amounts of successful missions as her Majesty's most trusted spy, 007. Goldeneye 007 changed Trevor's view on what a video game should provide and deliver and still uses Goldeneye as his golden standard for the basics of a good FPS.


## Zac Lau

Zac grew up watching his brothers play the Gamecube and for the longest time they only had two controllers. Finally, though when the Xbox360 came out, it was his time to shine.  Zac spent countless hours playing Modern Warfare 2 and Battlefield 3 with his friends after school and having the time of his life.  Then in 8th grade a friend of Zac's introduced him to PC gaming.  He never turned back.  Zac's friends and he would play all the Garry's Mod game modes. Zac has put in over 2000 hours into Counter-Strike: Global Offensive.  There Zac reached the top 3.195% of all players and its like having a badge of honor.

## Phil Jaques

Phil was forever changed the day he received his original Nintendo. Although, at the time it was just referred to as "The Nintendo". Hours spent engaging in improbable acrobatics as a nimble Italian plumber smashing Koopa Troopas and banging his head against blocks for questionable flowers and mushrooms molded him into the absolute nerd he is today.

## Jared Hubert

Jared's life changed forever in 2003 when he received his PlayStation 2. As a child of the 90s, he had grown up playing simple games on his Nintendo 64 and Game Boy, but the PS2 was a whole new world. The graphics were stunning, the gameplay was immersive, and the selection of games was endless. Jared spent countless hours exploring Spira as Tidus in Final Fantasy X, taking on giant bosses in Shadow of Colossus, or absolutely SHREDDING in Tony Hawk's Underground 2. The PS2 became his gateway to other worlds. To this day, Jared looks back with fondness and appreciation for the impact it had on his life.

# SALES BY YEAR

## CRASH OF ‘83

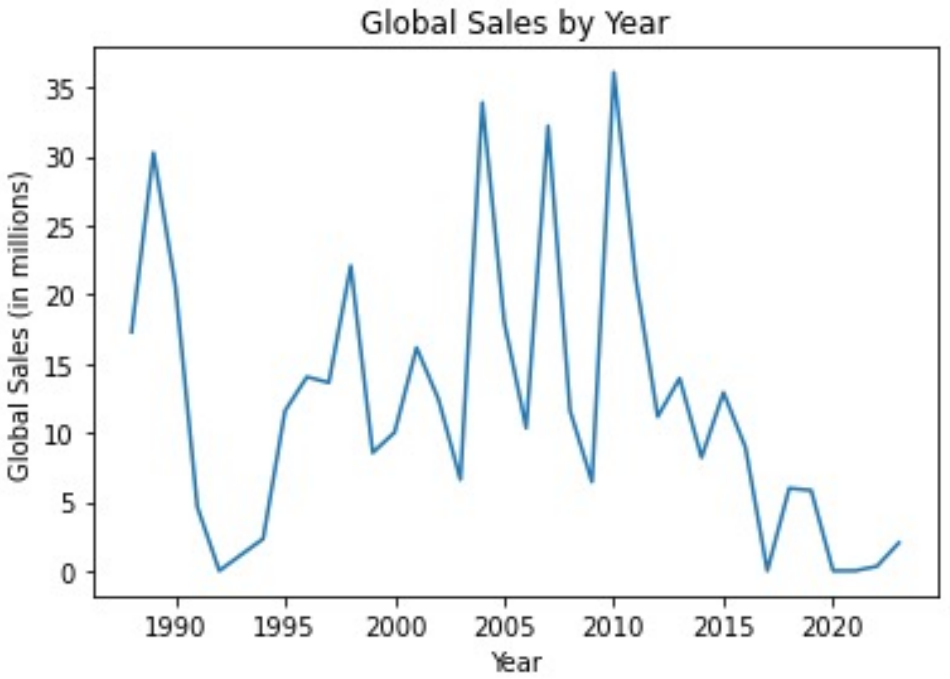
The video game industry has experienced growth and decline over the years, with the dip in sales between 1990 and 1995 likely due to the video game crash of 1983. The large spikes between 2000 and 2010 may have been due to the popularity of consoles and the rise of online gaming.

## PANDEMIC SLUMP

The low numbers in 2020 may be due to market saturation and the impact of the COVID-19 pandemic on consumer priorities and spending habits.

## DIGITAL DELIVERY

Changing consumer preferences, such as the rise of mobile gaming and free-to-play games, have affected the video game industry. The industry has also seen a shift towards digital sales and subscriptions, which will require continued adaptation to remain successful.



# SALES BY GENRE

## ACTION GAMING

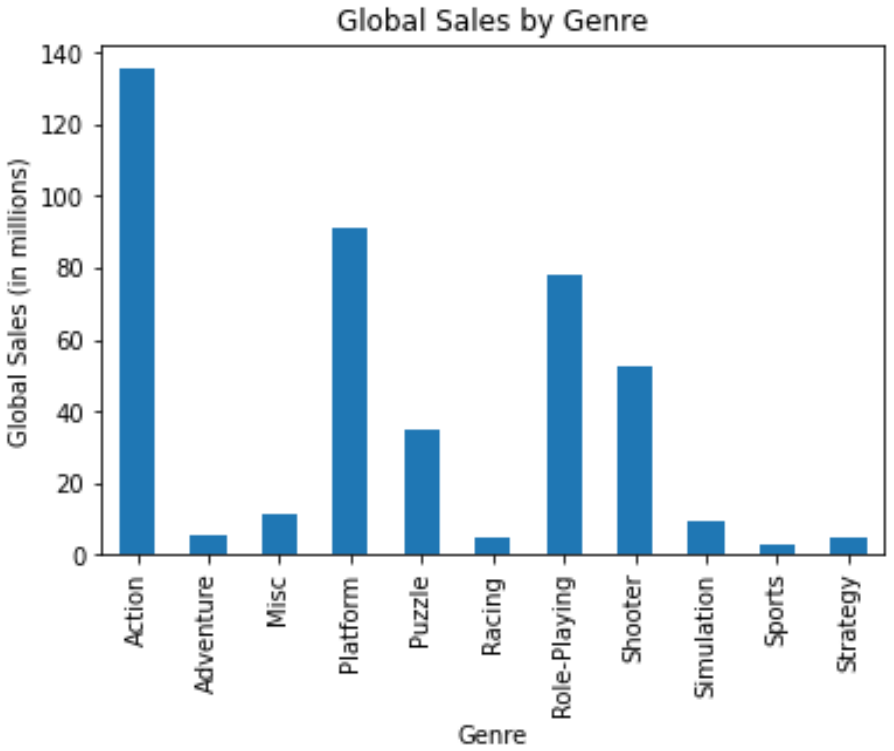
Action games show the highest sales due to it being a catch-all for several sub-genres. Action games have also existed the longest, as a lot of retro games in the arcades were meant to be bright and exciting, leaving Action as the best genre option.

## SPORTS GAMING

Our data set showed sports EXTREMELY low which leaves me to believe that it left out a significant amount of data on Madden and FIFA, which are two of the most popular games in the world when it comes to this genre.

## COMBINE THE BEST

Bottom line - if you are able to make an engaging and accessible action platformer, you are much more likely to be successful with your game.



# RISE AND FALL

**Counter-Strike: Global Offensive**:

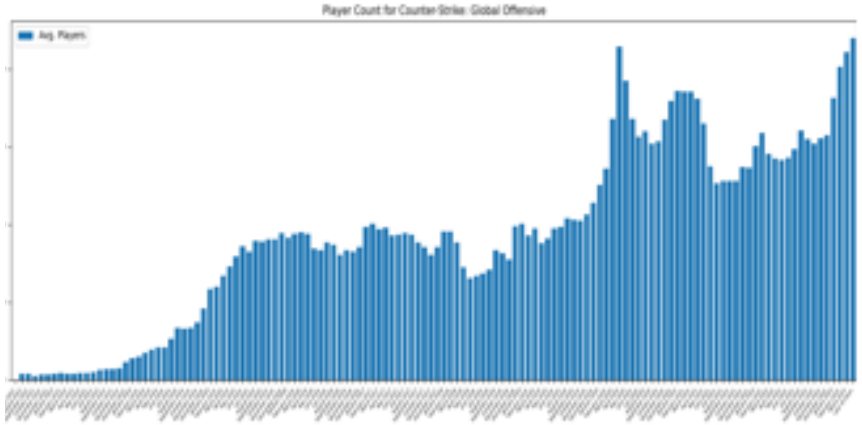
- Started relatively small with less than 1000 average players.
- Currently there is an average of 800,000 players per month.
- This comes from the game being competitive with a prestigious ranking system that makes players want to get better and better reaching new heights within the game.

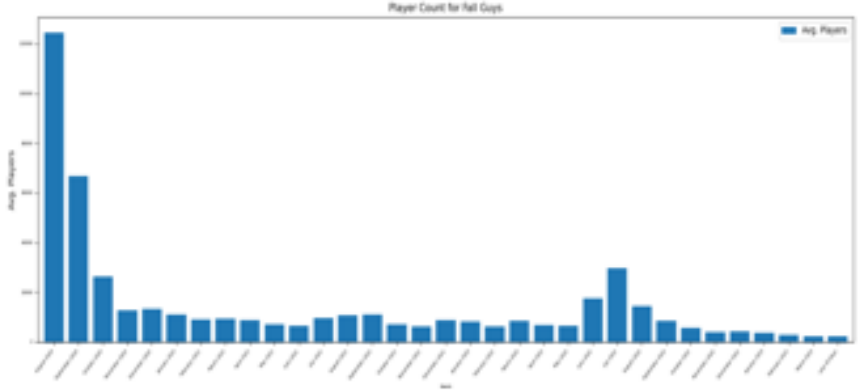
**Fall Guys**:

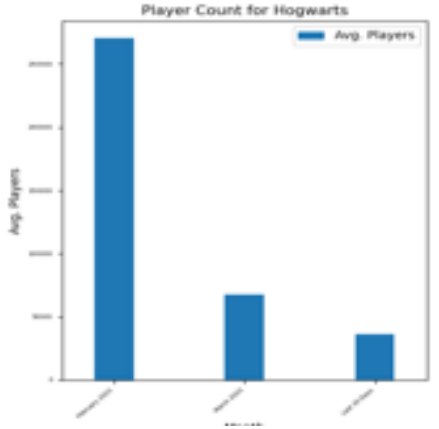
- Explosive start for a relatively cheap game with 172,000 players during launch.
- This game was more geared to be a party game.
- After initial hype from Streamers playing it. The game died off extremely quickly.

**Hogwarts Legacy**:

- Single player game that costed $150 million to make.
- Everyone was excited to play one of their favorite childhood stories.
- The game can only played so many times before it is redundant.

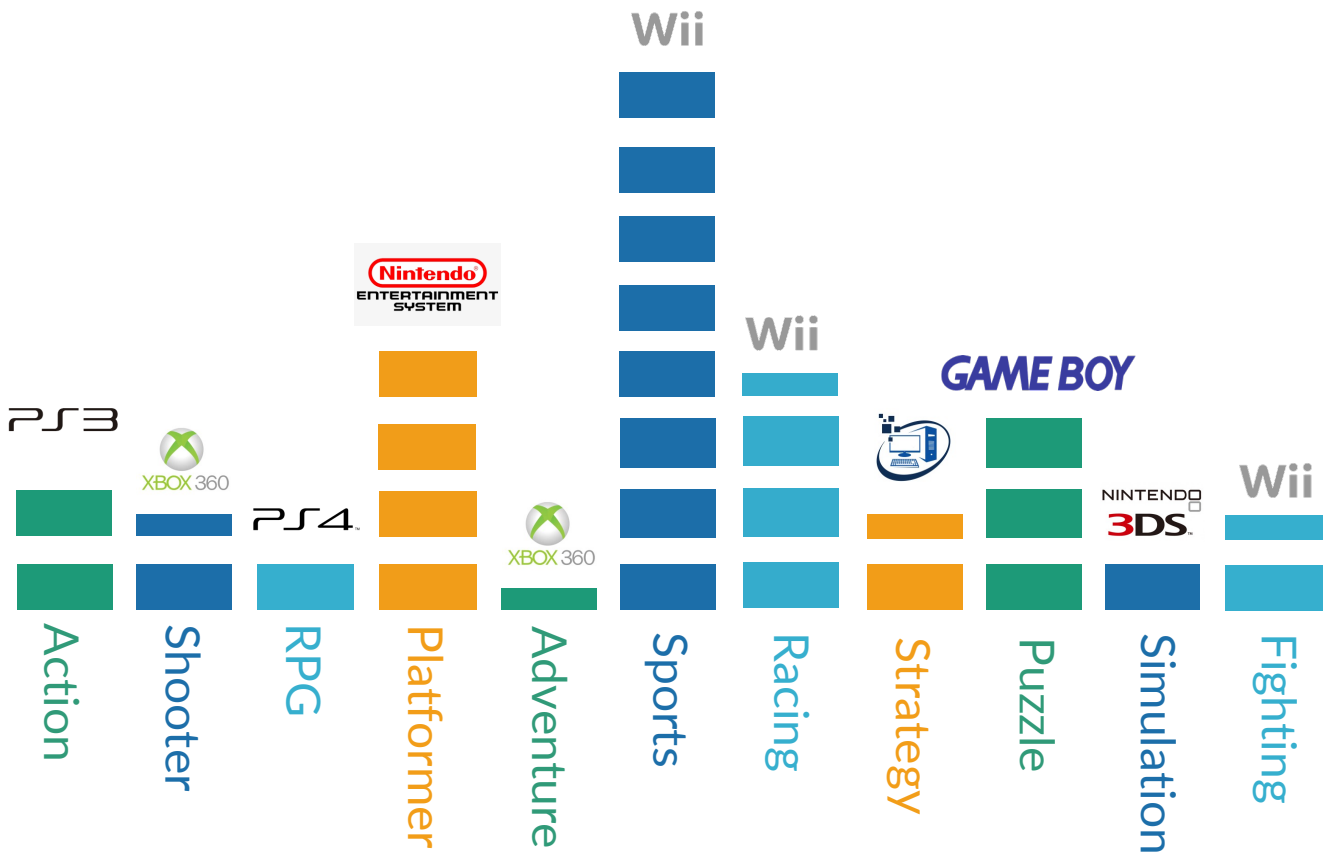


# TOP PLATFORMS FOR EACH GENRE

For the 11 genres we have examined, these are the top gaming platforms for each one.



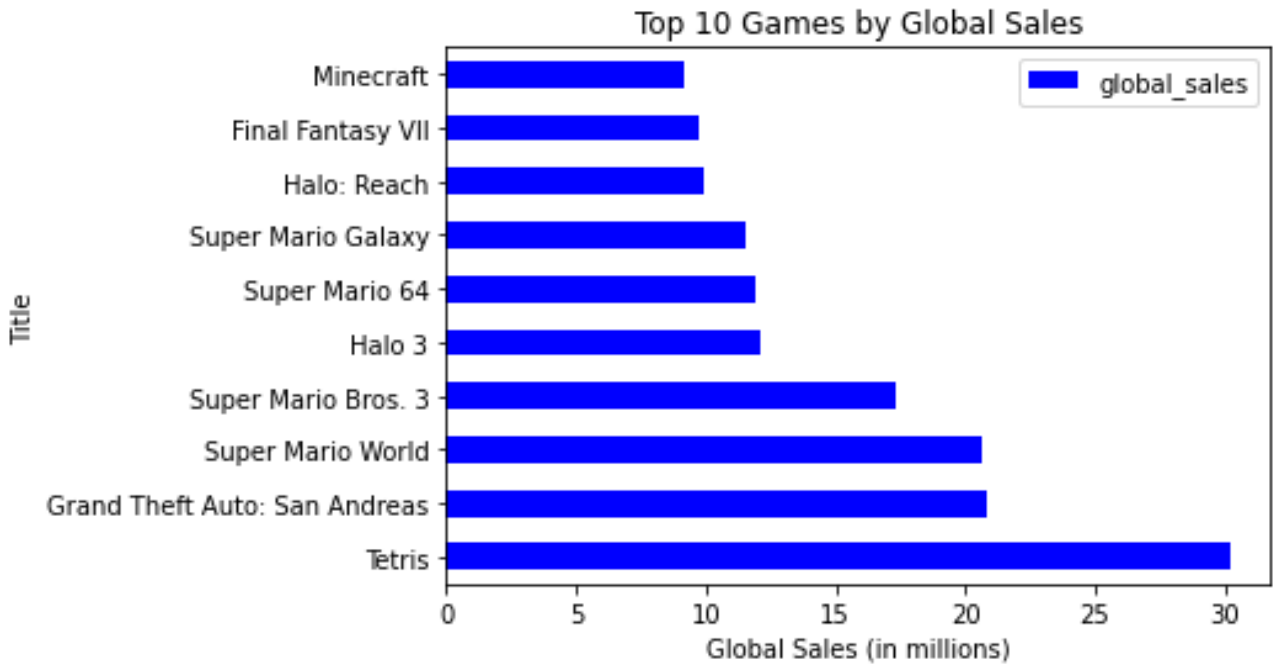

= $10 Million

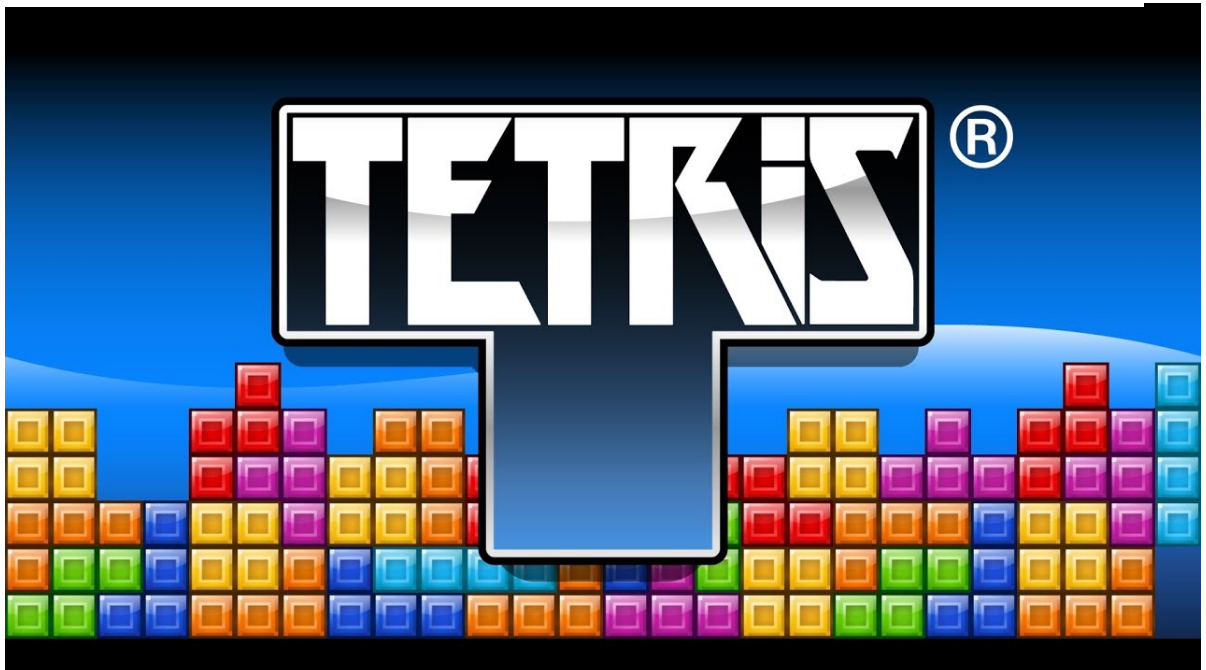
# GAME TIME!

# TOP 10 GLOBAL

While Nintendo holds the most entries in the top 10 with Super Mario Bros. proving why it is the classic, they can't beat the juggernaut of GTA: San Andreas, nor Tetris. Two games could not be more different. GTA brought a gritty and adult story to gaming, putting the player in the role of anti-hero, and Tetris brought hours of addictive and nail-biting puzzle action to hundreds of millions of players since its inception.

Honorable mention goes to Halo, which has been a cash cow for Microsoft's Xbox gaming system over several iterations.

# PREDICTIVE ANALYSIS

We used machine learning to create a predictive model for this data. Based on that model these are our observations.

## MODEL

Using the standard scaler to fit the data we used two hidden layers with “relu” as our activation layers and “sigmoid” as our output layer.

The resulting model gave us the following table...

## STANDARD SCALAR

After compiling, training, and fitting the data we found this model to be 99.13% accurate.

```
from sklearn.linear_model import LogisticRegression
from sklearn.metrics import accuracy_score

# Separate target variable and the features
X = tree_clean.drop('Success', axis=1)
y = tree_clean['Success']

# Split the data inot training and testing sets
X_train, X_test, y_train, y_test = train_test_split(X, y, test_size=0.2, random_state=42)

# Create the decision tree
dtc= DecisionTreeClassifier()

# Train the model on the training data
dtc.fit(X_train, y_train)

# Predict on the test data
y_pred = dtc.predict(X_test)

# Evaluate the accuracy of the model
accuracy = accuracy_score(y_test, y_pred)
print("Accuracy:", accuracy)
```

```
Accuracy: 1.0

4/4 - 0s - loss: 0.0227 - accuracy: 0.9913 - 42ms/epoch - 11ms/step
Loss: 0.022697536274790764, Accuracy: 0.991304337978363
```

## LOGISTICAL REGRESSION

To ensure the previous model’s accuracy we compared the same cleaned data using logistical regression. The cleaned data was winnowed down to 1086 rows and 5 columns. Our resulting accuracy score was 99.69%

## DECISION TREE

As an extra layer of predictive assurance, we ran a Decision Tree model. The same cleaned data of 1086 rows and 5 columns were used in this model and yielded a 100% accuracy evaluation.

# THANKS FOR LISTENING!

Any questions?