

Predicting Video Games Revenue on Steam

Presented by Stefan Stefanovic

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Who am I?



Research Analyst



Worked in small non-
profits and big
corporations

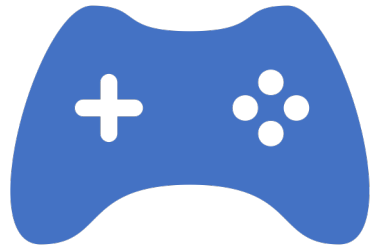


Passionate about
crunching data

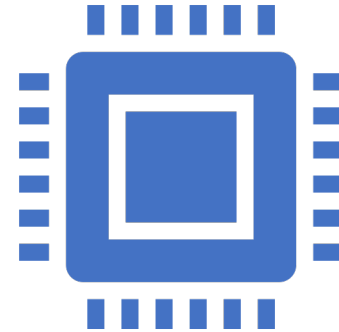


When I don't walk my dog
and ride bike I play video
games

Why Video Games and why Steam



I like to play video games on PC.



Steam is a digital platform created by Valve to distribute PC games with over 80k games.

What questions will I try to answer?



Is there a way I can calculate video game sales on Steam?



Is there a magic formula that game developers can use to maximize their chance of making a game that will be popular?

How was data collected?

- Utilized Python's ThreadPoolExecutor and SteamSpy API.
- Due to time constraints and Steam Store API request limit, a portion of data was downloaded from Kaggle.

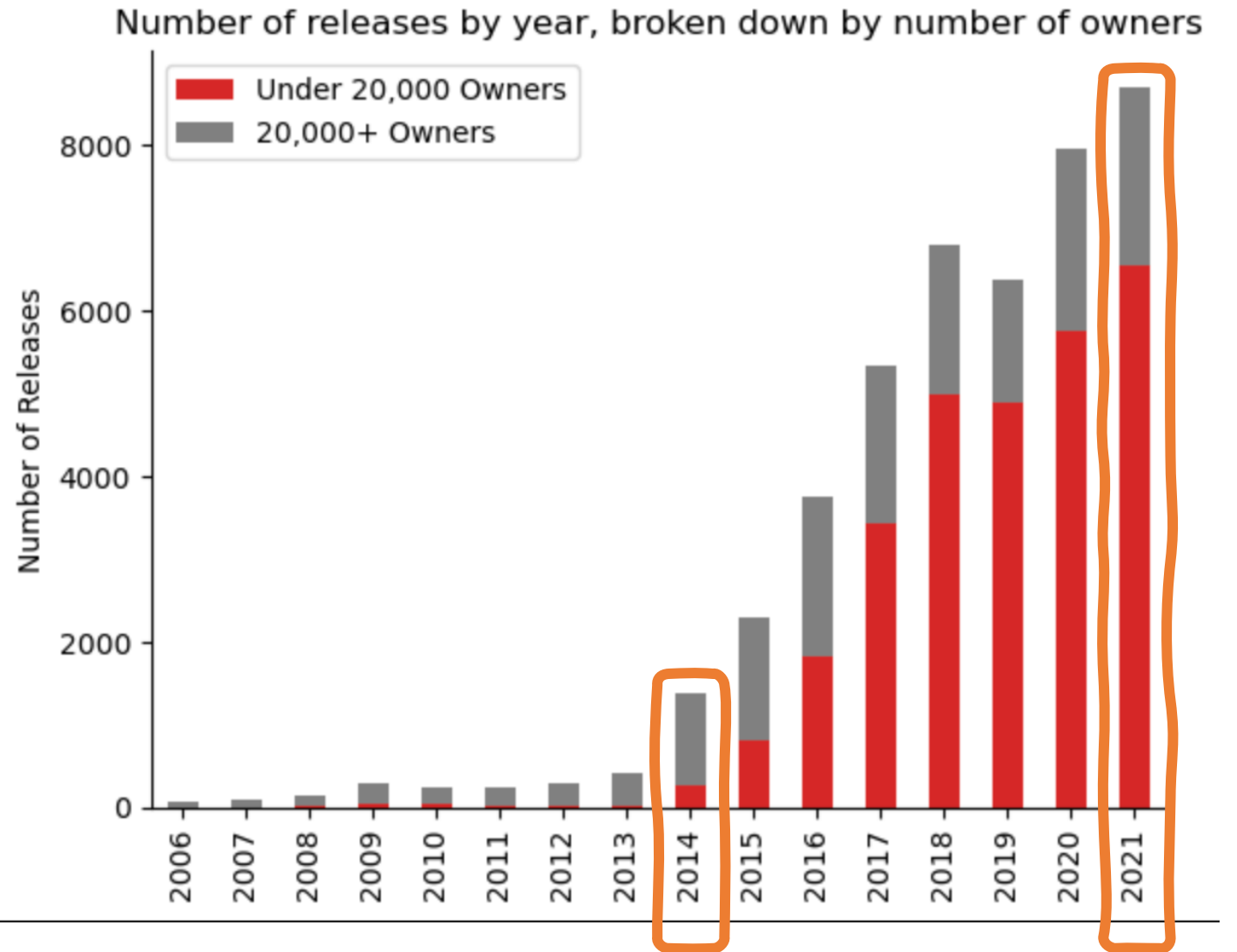


Different Approaches to Estimate Video Game Sale

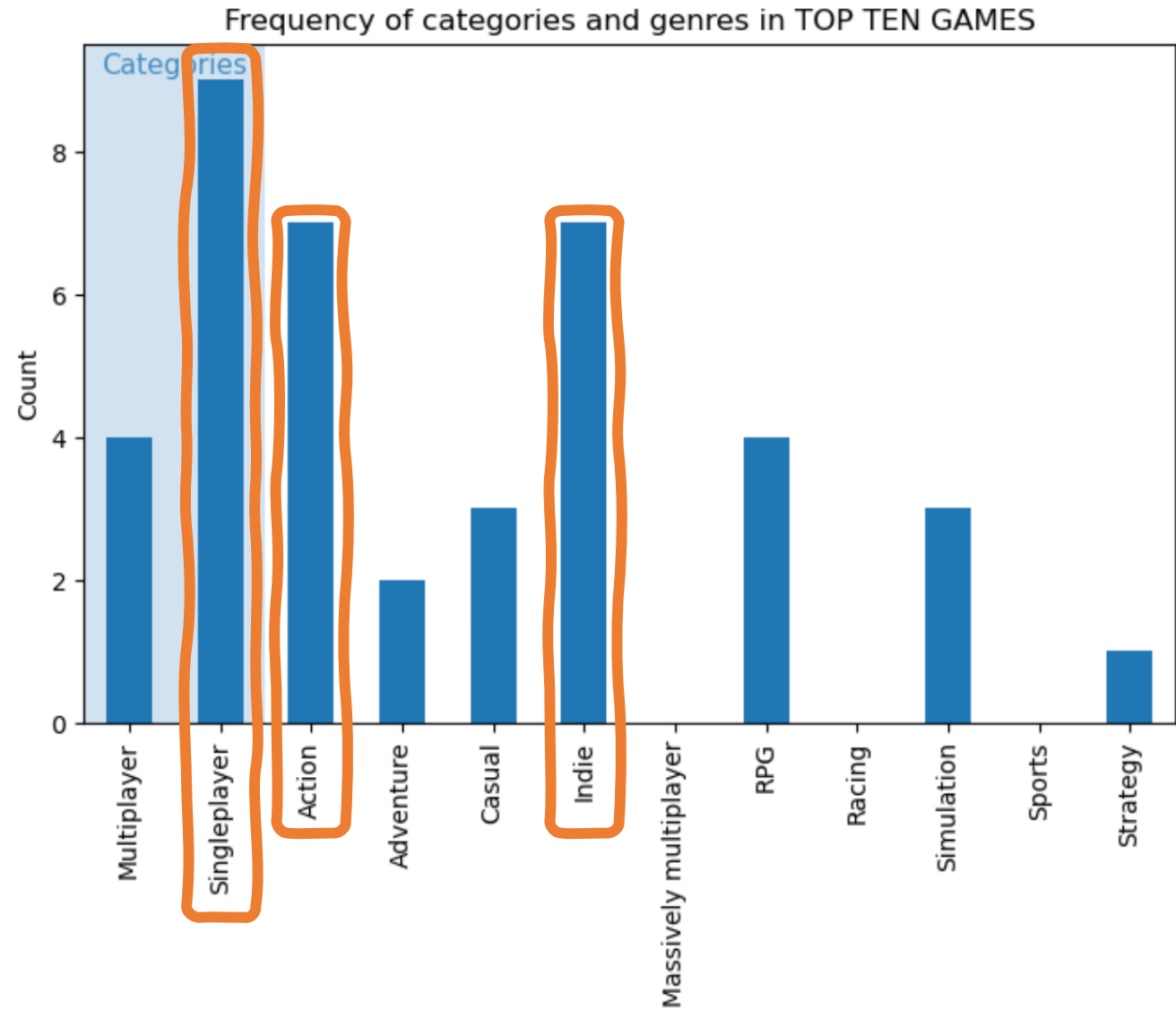
- Wishlist
- Achievement Stats
- Week 1 Sales
- Number of Reviews



Number of Games on Steam



Different Video Games Categories and Genres





Using Variables to Predict Number of Owners of the Game

- 55 variables achieved an Adjusted R-squared of 0.675, indicating that these variables could explain approximately 68% of the variability in predicting the number of game owners.
- After removing 22 variables with large p-values, the model's Adjusted R-squared was reduced to 0.638.
- Surprisingly, **one variable alone explained 58%** of the variability in predicting the number of owners. **Can you guess which one it was?**



Using Variables to Predict Number of Owners of the Game

The variable that stood out as the most influential was the **Total Number of Ratings** with coefficient of 25.8225!

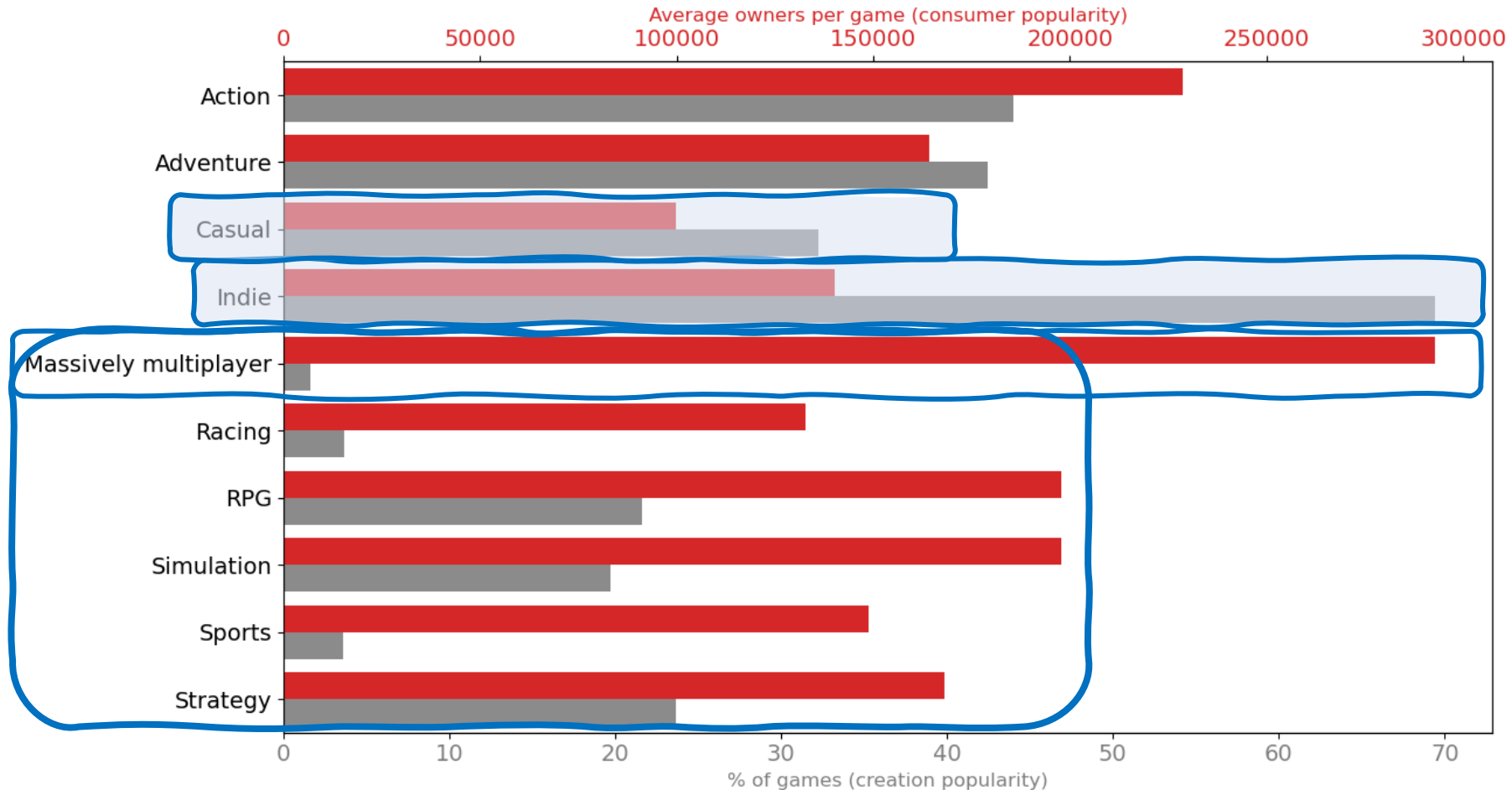
That means that if the game had 100 reviews, number of owner would be around 38,000.

Constant + Coefficient * Reviews = Pred. number of owners

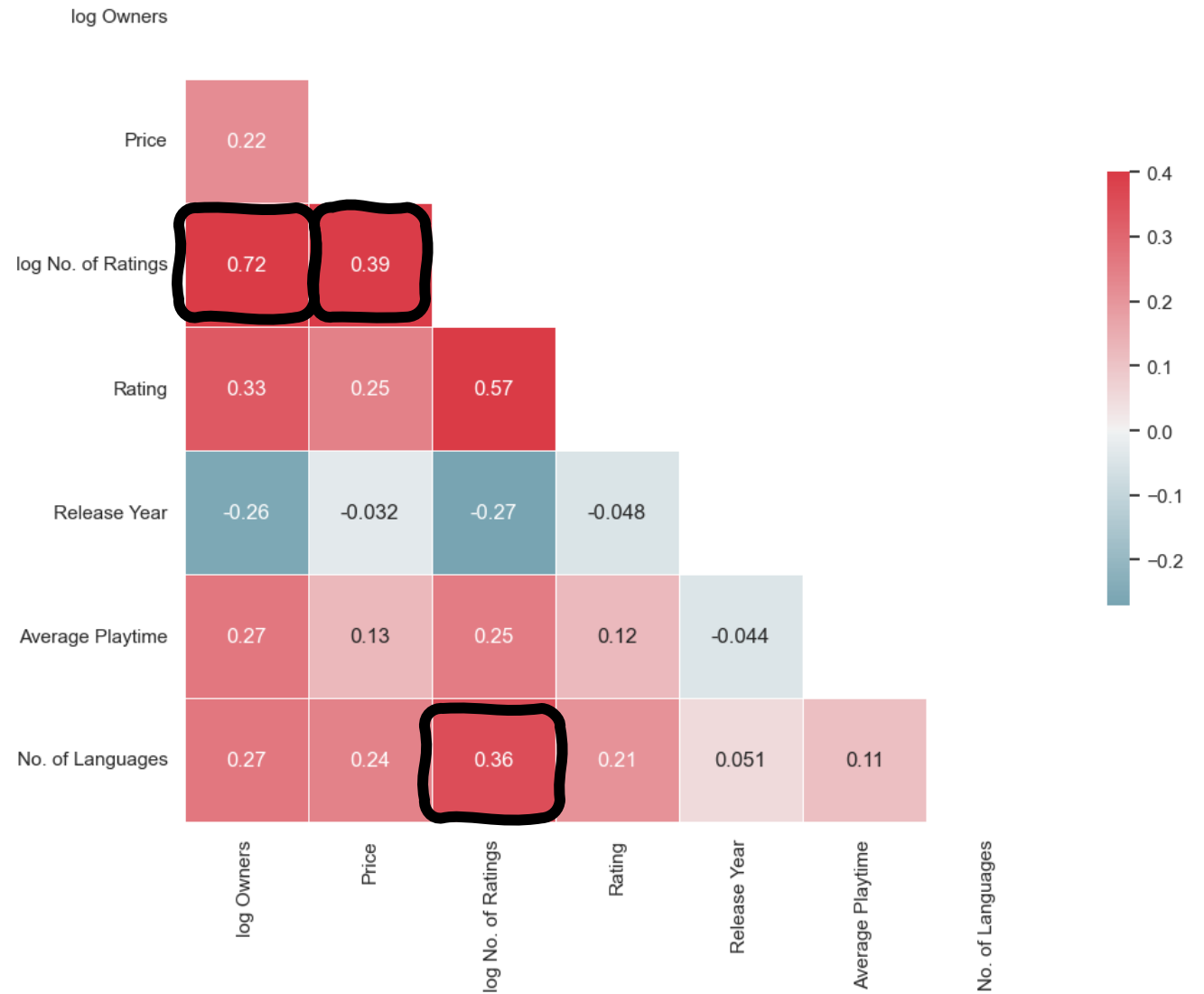
$$34,840 + 25.8 * 100 \approx 38,000$$

$$34,840 + 25.8 * 1,000 \approx 61,000$$

What video game genre has most room to grow?

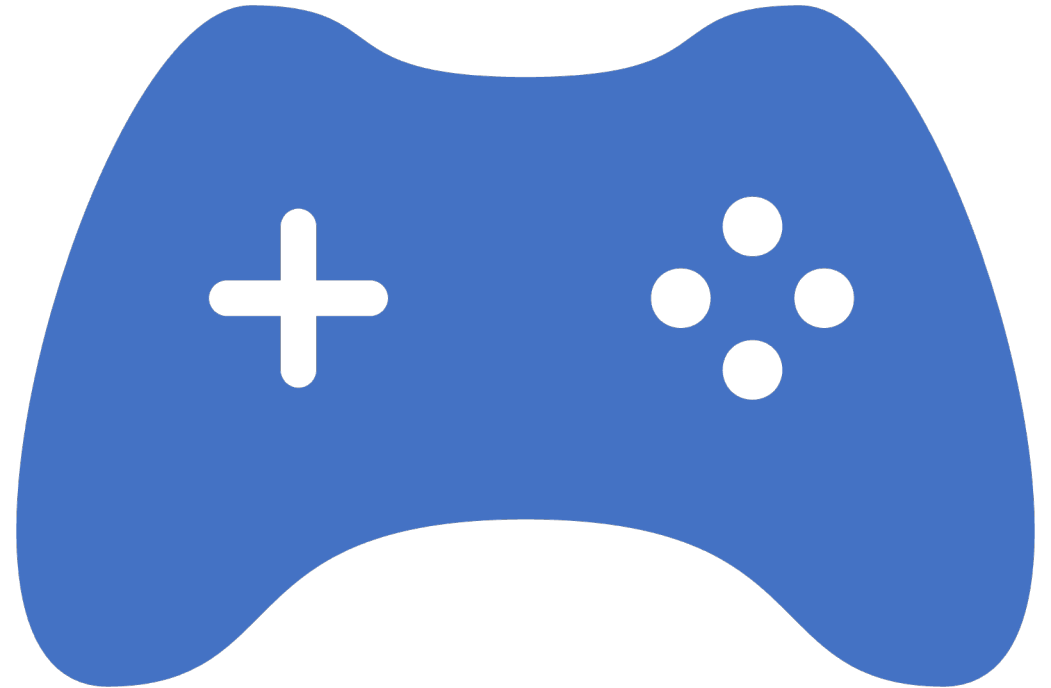


Correlations between different variables



Answering our two previous questions!

- Is there a way we can calculate video game sales on Steam?
 - Yes we can! (sort of)
- Is there a magic formula that game developers can use to maximize their chance of making a game that will be popular?
 - Not really, but it seems like Massive Multiplayer, Racing, RPG, Sports and Strategy have most room to grow.



Future Improvements

1. Combine additional datasets for improved prediction accuracy.
2. Collect historic data on game prices and player numbers for trend analysis and forecasting.
3. Incorporate user behavior and preferences to identify revenue-generating game types.
4. Explore data from streaming platforms and esports to predict game success.



Thank you for your time and attention



Stefan Stefanovic
Data Analyst

