Video Game Recommender

Project 4 Group 11

Meet Our Team

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Inspiration and Purpose

Playing video games is something most of us all enjoy in our spare time

Explore and analyze player data to identify trends further tailored suggestions in the video game industry
Predict trends in the industry

Dataset

The dataset started with over 16,000 games, but during the **data cleaning** process it was narrowed down to just 7,900 games! (50% loss of games!)

The reduction was caused by **games without a review score.**

There means there are a lot of **potentially underrated games** out there!

Research Questions

Correlations between Sales Vs Genre?

Correlations between Critic Scores and Most Popular Game Publisher?

What are the most popular games?

Who is the top publisher?

Which genres get the most attention?

Machine Learning Model

Models:
- Neural Network model
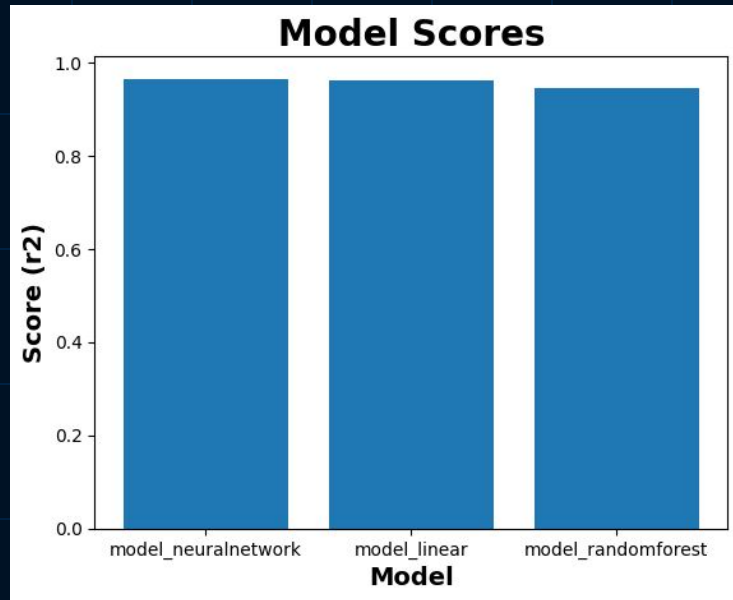- Linear model
- Tree (specifically: random forest) model

Column to predict:
- Global Sales

Model performance
A score of 1 meaning "accurate,"
all of the models passed the goal of 0.80

- Neural Network R^2 score: 0.96
- Linear R^2 score: 0.96
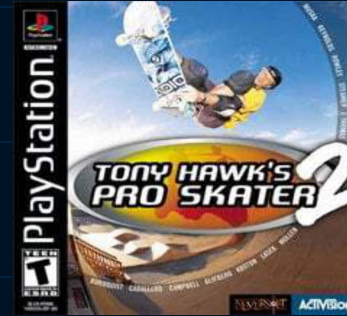- Tree (random forest) R^2 score: 0.94

Model Scores

Application Demo

Game Score

The highest Critic Score of 99/100 is "The Legend of Zelda Ocarina of Time" on the Nintendo 64 platform.

In a three-way tie for 2nd with a Critic Score of 98/100 are: "Tony Hawk's Pro Skater 2" for the PlayStation 1 platform, "Soul Calibur" for the Sega Dreamcast platform and "Grand Theft Auto IV" for the XBox 360 and PlayStation 3 platforms
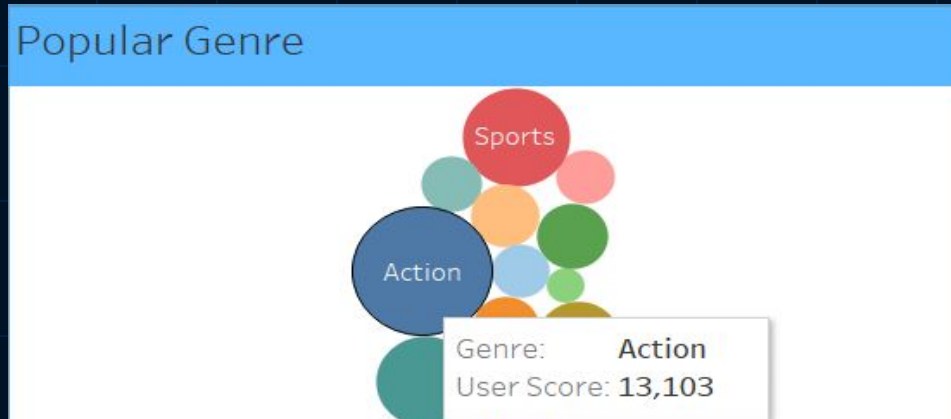
Top Developer

The number one publisher for this video game dataset is Electronic Arts. Some of the top titles are: FIFA 16 for PS4, FIFA Soccer 13 for PS3 and The Sims 3 for PC. In 2nd is Activision with notable titles such as: Call of Duty: Modern Warfare 3 for X360, Call of Duty: Black Ops 3 for PS4 and Call of Duty: Black Ops for X360 and in 3rd is Ubisoft with their "Just Dance" series 1-4 for the Nintendo Wii.

Popular Genre

Action genre is the most popular with a User Score of 13,103 which is let by The Legend of Zelda: Ocarina of Time on the Nintendo 64 platform, Grand Theft Auto IV for the X360 & PS3 and Grand Theft Auto V for X360 & PS3

Conclusions

Globally, PlayStation 2 was the most popular platform

Electronic Arts (EA) is the Top Game Developer with Sports being the most popular game genre

Biases and Limitations

Data set did not included actual prices for video games. Only gave per million copies sold.
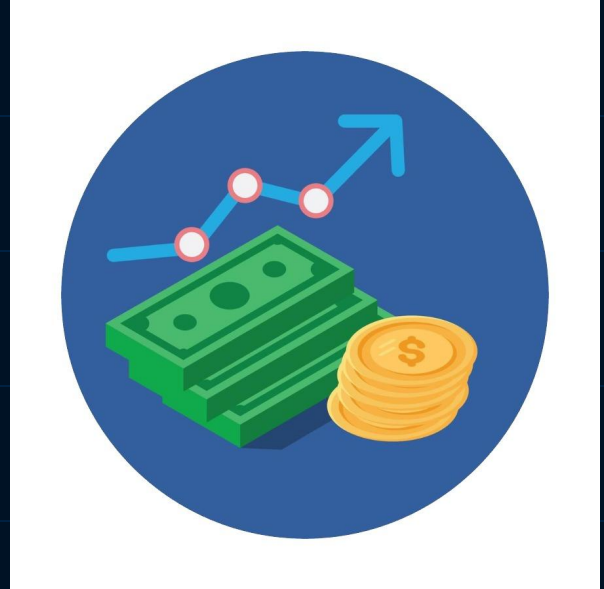
Does Not include variables such as subscription 3rd party downloads

Data set categorized DLC content as stand alone video game vs add on to original game.

Future Work

Train a model that predicts Global Sales **without other sales data** (NA Sales, EU Sales, etc.)

Sources

Images
      -https://www.pexels.com/search/video%20game/
      - metacritic logo, wink emoji, earth, sales

Data sets-https://www.kaggle.com/datasets/rush4ratio/video-game-sales-with-ratings

https://www.kaggle.com/datasets/deepcontractor/top-video-games-19952021-metacritic

https://www.kaggle.com/code/maxkliment/video-games

https://github.com/martabaker/ds_project_4_group_02