Video Game Sales Analysis

Using Jupyter Notebook, Flask API, PostgreSQL, HTML, CSS, JavaScript, Python

Alvaro, Dozie, Emmanuel, Frantzy, Jonathan, & Mickey

Snapshot of
Video Games Sales

- The video games market is projected to reach **$384.9B** in 2023.

- The number of gamers in projected to reach **3.1B** by 2027.

- There are expected to be **3,552** game studios by the end of 2023.

- There were **10,963** games released in 2023.

via ibisword.com & statista.com

Share your thoughts in the Zoom Chat!

?

Question for the class?

*What video game **genre** do you think **generated the most sales**?*

*What **game** do you think had the **highest global sales**?*

Our Process

Prepping the Data

- Finding our data source
- Cleaning/testing data in Jupyter Notebook
- Creating ERD Diagrams, setting up databases, & merging tables

Planning the Visualizations

- Identifying what questions we want to answer
- Selecting the visualizations
- Selecting an additional JS library (Google Charts)

Creating the SQL Queries

- Creating Flask APIs (150+ routes)
- Querying merged database to create various charts

Designing the Dashboard

- Creating visualizations
- Creating HTML & CSS
- Creating views for each genre
- Creating additional site pages & team info

Our Dataset

Data

- Dataset provides insight into global video game ratings and sales.
- Columns in the dataset include genre, publisher, and rating
- By analyzing the data we were able to delve into trends and gain insight by looking at the relationship between certain features.

Cleaning

- *To prepare the data for SQL querying, the data was cleaned in a manner that allowed it to be imported into a SQL database, postgres*

www.quickdatabasediagrams.com

video_game_info

- uniqueid
- name
- yearreleased
- genre
- publisher
- developer
- rating

video_game_scores

- uniqueid
- name
- criticscore
- criticcount
- userscore
- usercount

video_game_sales

- uniqueid
- name
- nasales
- eusales
- jpsales
- othersales
- globalsales

ERD-Database Schema

- First, the original dataset was normalized to create three(3) CSV files based on the research insights we seek to unravel, and then imported into pgAdmin.

- The database schema is depicted on the ERD diagram; the tables were linked with the uniqueid, and we were able to run some join queries from the database

We created a dashboard to help solve the following questions:
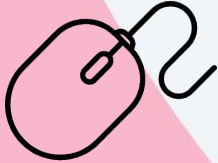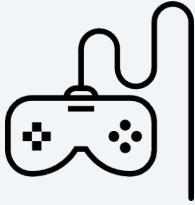
What genre generates the most sales?

What genre gets the best reviews?

What country generates the most sales?

What publishers are the most successful in each genre?

What publishers generate the most revenue?

Are certain genres more popular in certain countries?

Do certain genres generate more revenue?

What are the most popular games in each genre
(based on sales or user/critic review)?

What years had the most sales?

What years had the most popular games (based on user/critic review)?

Gross sales overall by Genre, Publisher, Country?

Do certain Ratings get better reviews (Mature, Everyone, Teen, etc.)?

Top Developers by Genre?
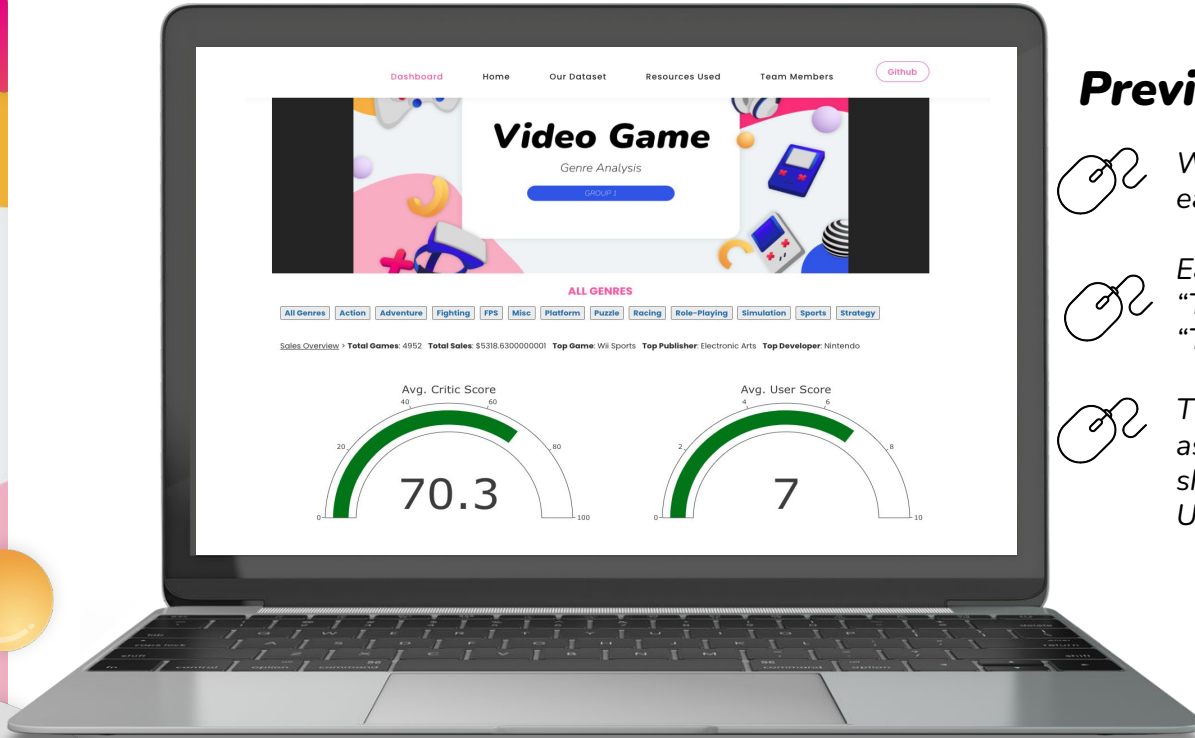
Preview of the dashboard

We decided to use separate HTML links to each genre.

Each HTML provides a brief overview of "Total Games", "Total Sales", "Top Game", "Top Publisher", and "Top Developer"

There are also multiple visualizations such as Gauges, Bar & Bubble Charts, etc. to show a snapshot of the Average Critic and User Score, Global Sales, and more

Live Demo

Video Game Analysis Dashboard
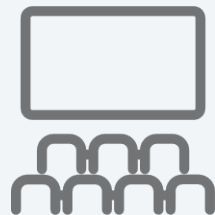
Analysis Findings

Action is a Game Changer

- Action games get the highest reviews from both users & critics
- The Action genre generate the most sales in 2 out of 3 regions
- Action has more games than any other genre

Sports Dominate the Top 10

- When assessing the Top 10 games based on Global Sales, Sports make up the majority of revenue and have high critic scores
- The second highest grossing Genre is FPS

Puzzle & Strategy are Head Scratchers

- The Puzzle & Strategy genres were bottom performers in terms of Global Sales, yet rank amongst the top in terms of Critic & User scores

THANKS!

Questions?

Alvaro, Dozie, Emmanuel, Frantzy, Jonathan, & Mickey