Ravenclaw Gaming Investment Group

Ako Kitamura, Charul Mathur, Rui Parreira, Davy Goupil

Agenda

01
Project
Overview

02
Data Wrangling
& Data Cleaning

03
Exploratory
Data Analysis

04
Teamwork &
Project
Management

05
Major Obstacle

06
Conclusion

Dataset: Gaming Industry Trends

Key Features:

➜ Game Sales & Revenue Data (across various platforms)

➜ Popular Gaming Platforms & Trends (PC, Console, Mobile)

➜ Genre-Wise Game Popularity (Action, RPG, FPS, etc.)

➜ Yearly Market Trends & Growth Insights

➜ Player Engagement & Gaming Patterns

Hypothesis

Higher the Metacritic, higher the game sales / revenue

Platform with growing trends over a few years is a good investment

Certain genre systematically outperform others

Platform with more players generate higher revenue

Structure & Process Followed

Project Setup & Planning

Data Collection & Retrieval

Data Wrangling & Cleaning

Analysis & Hypothesis testing

Coding Best Practices & Finalization

Documentation & Presentation

++++

Challenges Faced

Missing Data

Mixed Data Types

Inconsistent Formatting

Duplicate Records

Incorrect Numeric Values

Outliers and Influential Values

Category Overlaps & Ambiguous Labels

Exploratory Data Analysis (EDA)

Threshold Analysis

We tested whether certain threshold in higher review rate correlates with revenue.

Benchmarking & Ranking

We compared the financial efficiency of the core console platforms on a per-game basis.

Segmentation & Ranking

We segmented the revenue data by 3 categorical variables; Platform, Genre, & Total Revenue to find the most attractive platform to invest.

Teamwork & Project Management

Ravenclaw

Share 1

Mon, 9:00-13:00
- Week4 1st Project Task Link
- ☑ Look for interesting topic
- ☑ Create Kanban Board
- ☑ Find Datasets for Console Games (Switch, PS, Xbox) 2 is min.
  - 🕐 Dec 8 📎 1
- ＋ Add a card

Mon, 14:00-18:00
- ☑ TEAM MTG : fix Hypothesis, Research Questions
  - 🕐 Dec 8 📎 1
- Examine the data, understand what the fields mean before proceeding with data cleaning and manipulation.
- ☑ Import CSV/Excel
- Apply >5 data cleaning tech
- ☑ Cleaning the dataset
- ☑ creating function and adding to py.file
- ☑ commit our files
- ☑ TEAM MTG : structure, quality of a dataset, identify potential "issues or problems" PLAN cleaning and transforming the data.
- ＋ Add a card

Tues, 9:00-13:00
- ☑ TEAM MTG : Pull & Git conflict Resolution
- ☑ Structure the data (creat. new fields, grouping data, or creating pivot tables)
- ☑ Finalize all cleaning, transformation, and analysis tasks
- ＋ Add a card

Tues, 14:00-18:00
- ☑ Git conflict Resolution
- Use aggregation and filtering techniques to further refine the dataset and to start drawing conclusions about your hypotheses.
- ☑ If needed, work with SQL Workbench
- ☑ Work on charts, graphs
- ☑ Perform Exploratory Data Analysis
- ☑ Finish refining your code according to best practices
- ＋ Add a card

Weds, 9:00-13:00
- Git conflict Resolution
- Add contents to Google Slides
- Analysis
- Work on Conclusion & Hypothesis
- ＋ Add a card
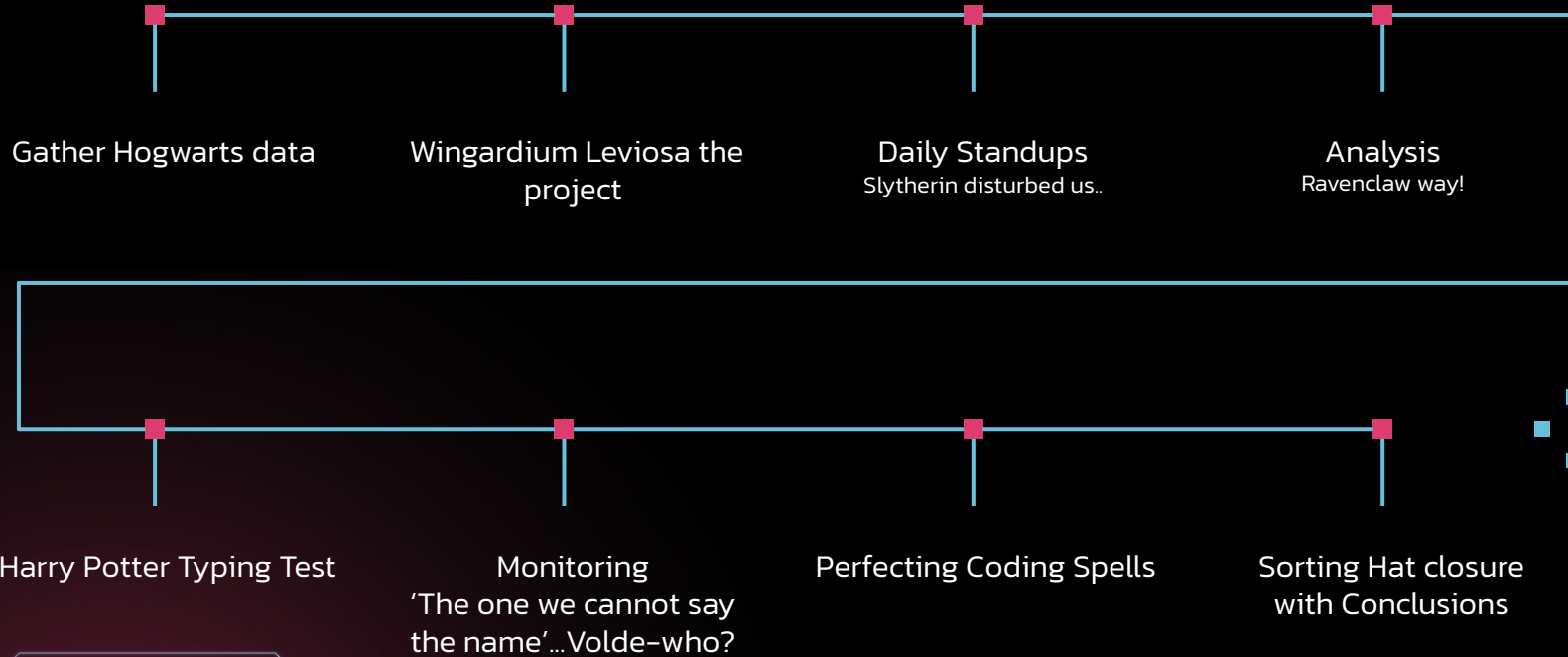
Weds, 14:00-18:00
- Git conflict Resolution
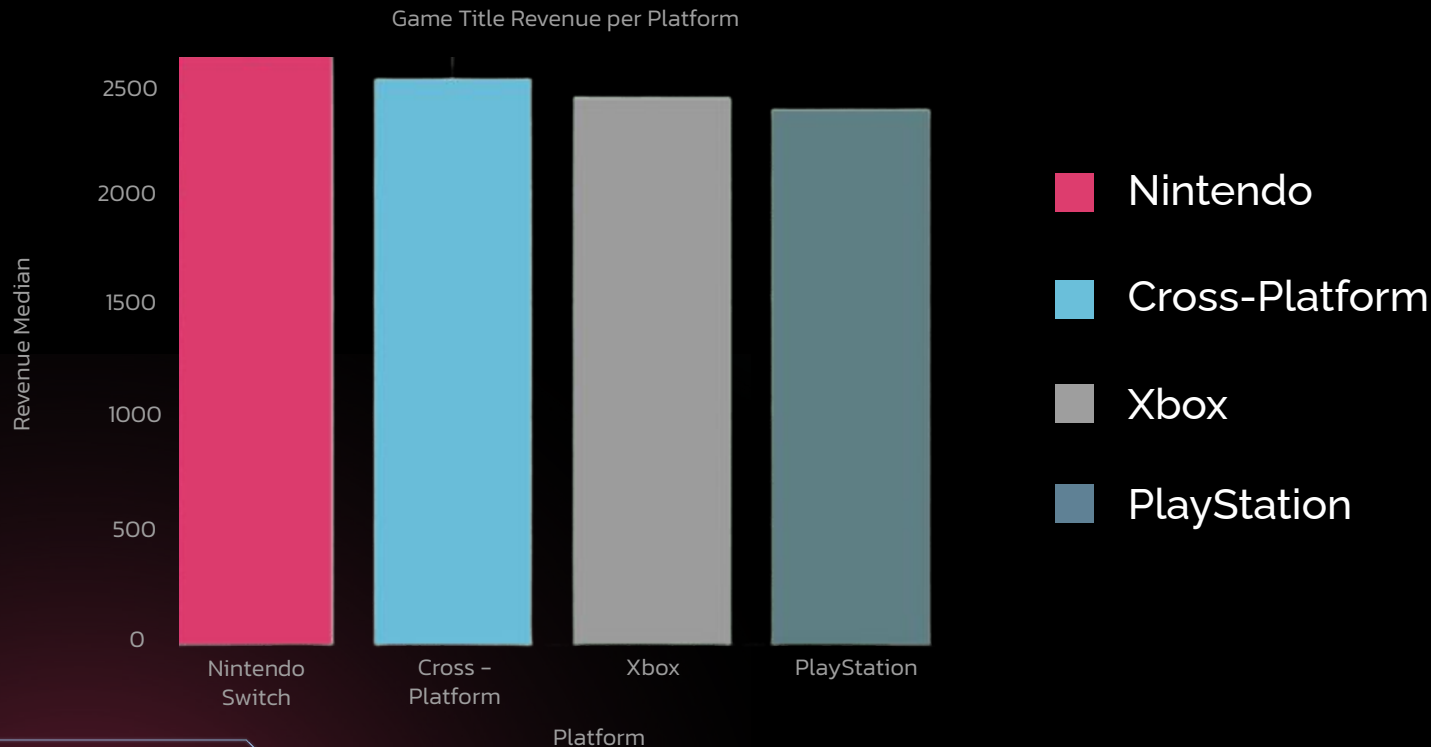- ＋ Add a card

Thurs, 9:00-13:00
- git conflict resolution
- Finalise Google slides : min texts, compelling narrative, significance of analysis
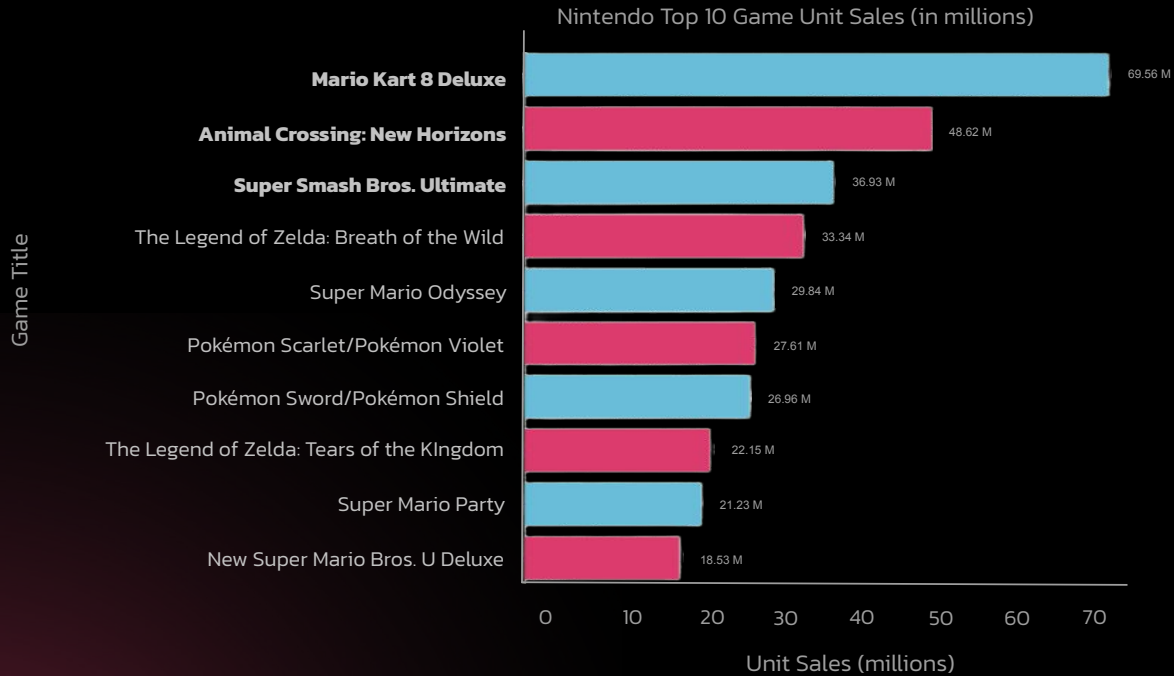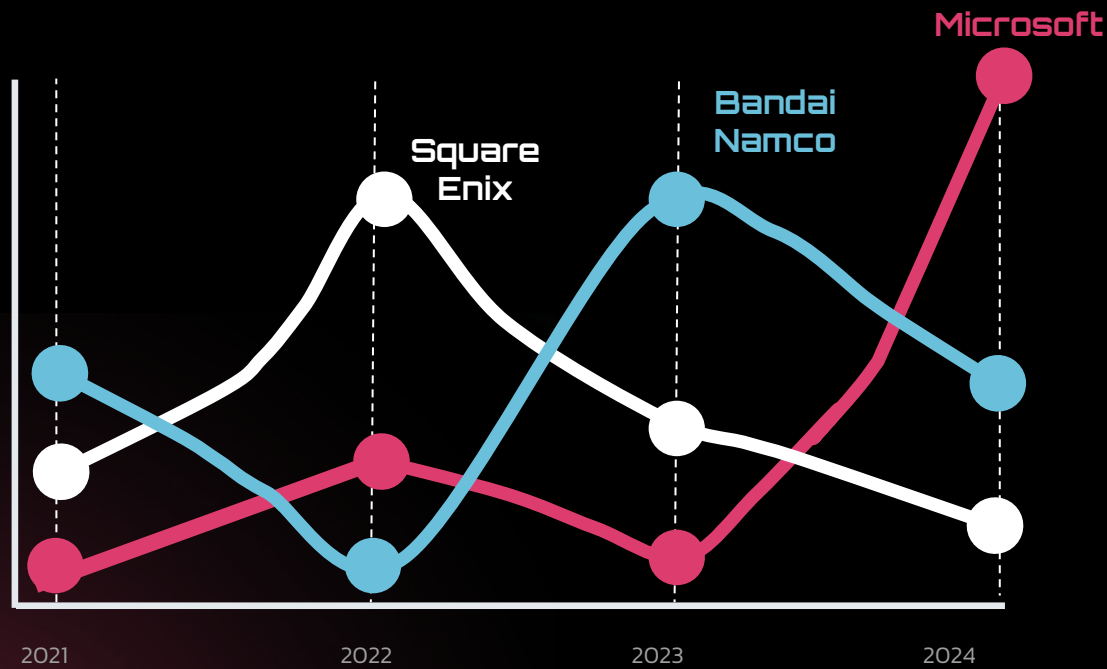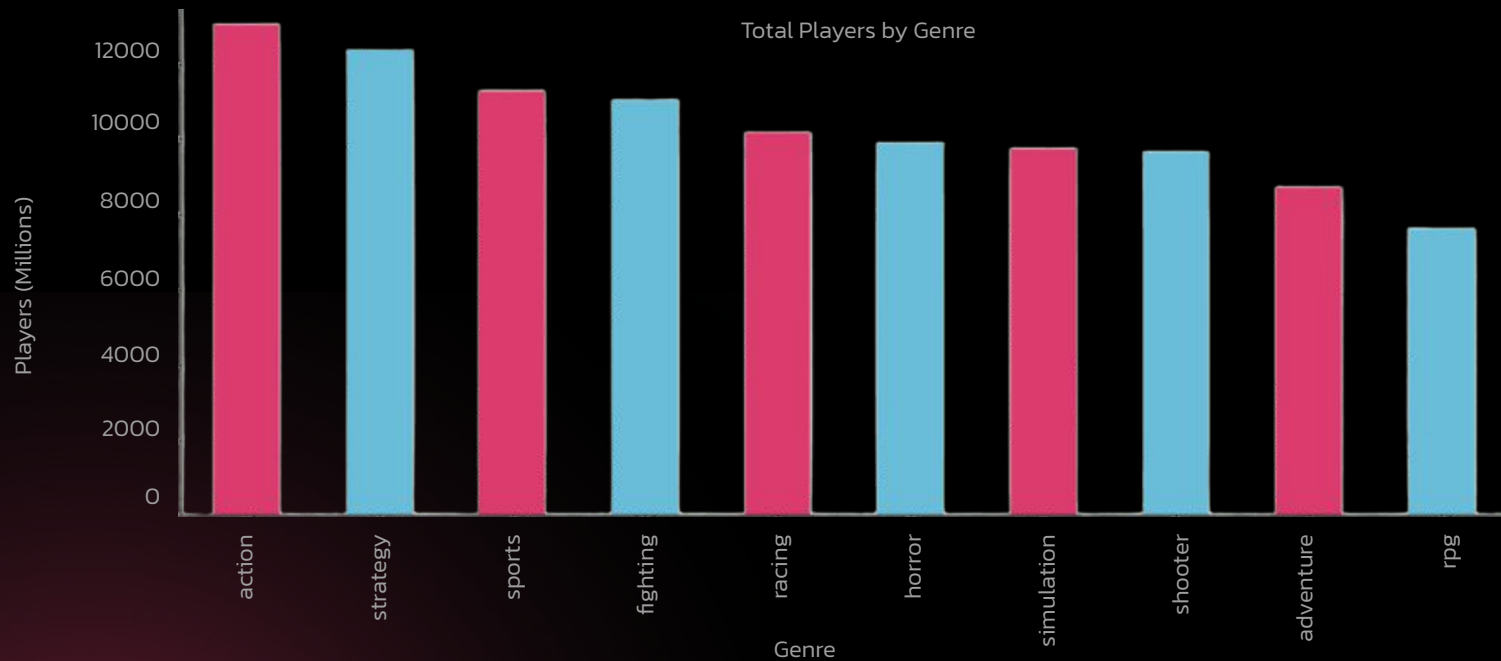- ＋ Add a card

Wizarding Journey Timeline

HOGWARTS EXPRESS

Gather Hogwarts data

Wingardium Leviosa the project

Daily Standups
Slytherin disturbed us..

Analysis
Ravenclaw way!

Harry Potter Typing Test

Monitoring
'The one we cannot say the name'...Volde-who?

Perfecting Coding Spells

Sorting Hat closure with Conclusions

Nintendo - By Game Title

Nintendo Top 10 Game Unit Sales (in millions)

Game Title	Unit Sales (millions)
Mario Kart 8 Deluxe	69.56 M
Animal Crossing: New Horizons	48.62 M
Super Smash Bros. Ultimate	36.93 M
The Legend of Zelda: Breath of the Wild	33.34 M
Super Mario Odyssey	29.84 M
Pokémon Scarlet/Pokémon Violet	27.61 M
Pokémon Sword/Pokémon Shield	26.96 M
The Legend of Zelda: Tears of the KIngdom	22.15 M
Super Mario Party	21.23 M
New Super Mario Bros. U Deluxe	18.53 M

Dev Rev Growth Over 3 years

Total players by Platform

Total Players by Platform

Metacritic Score VS Revenue
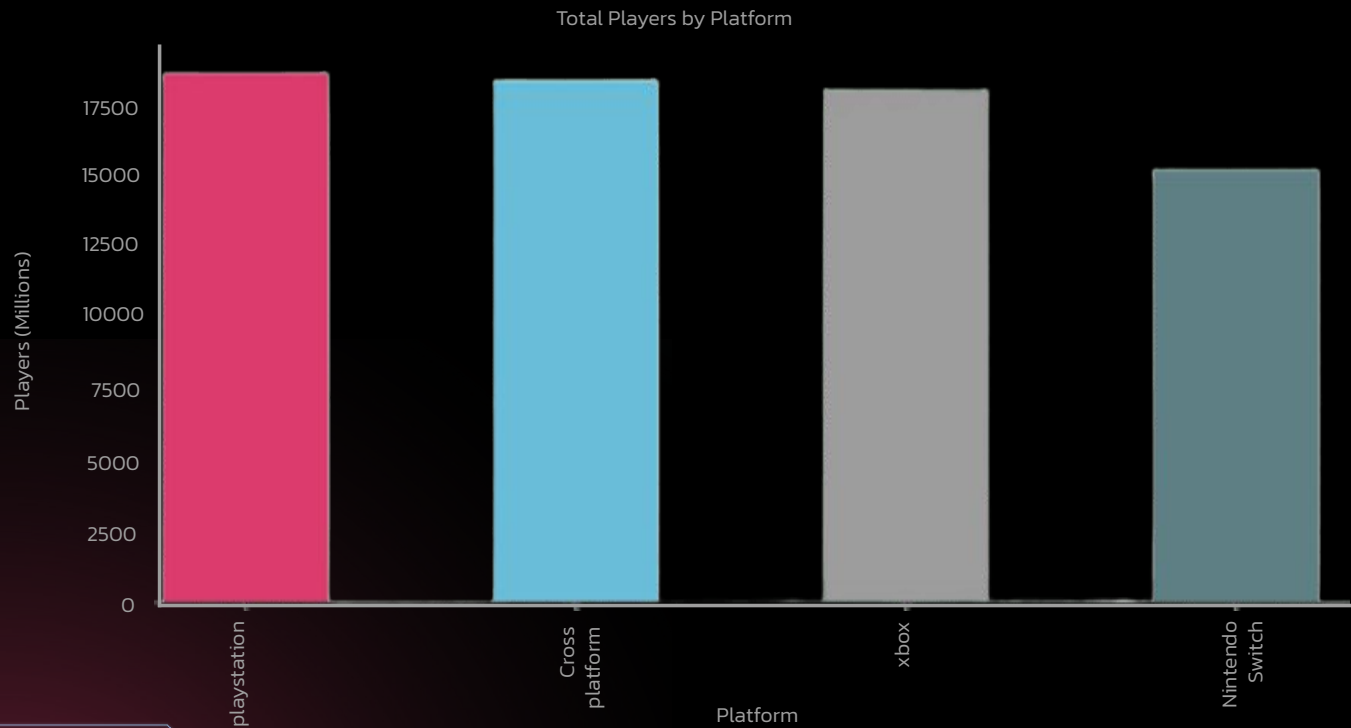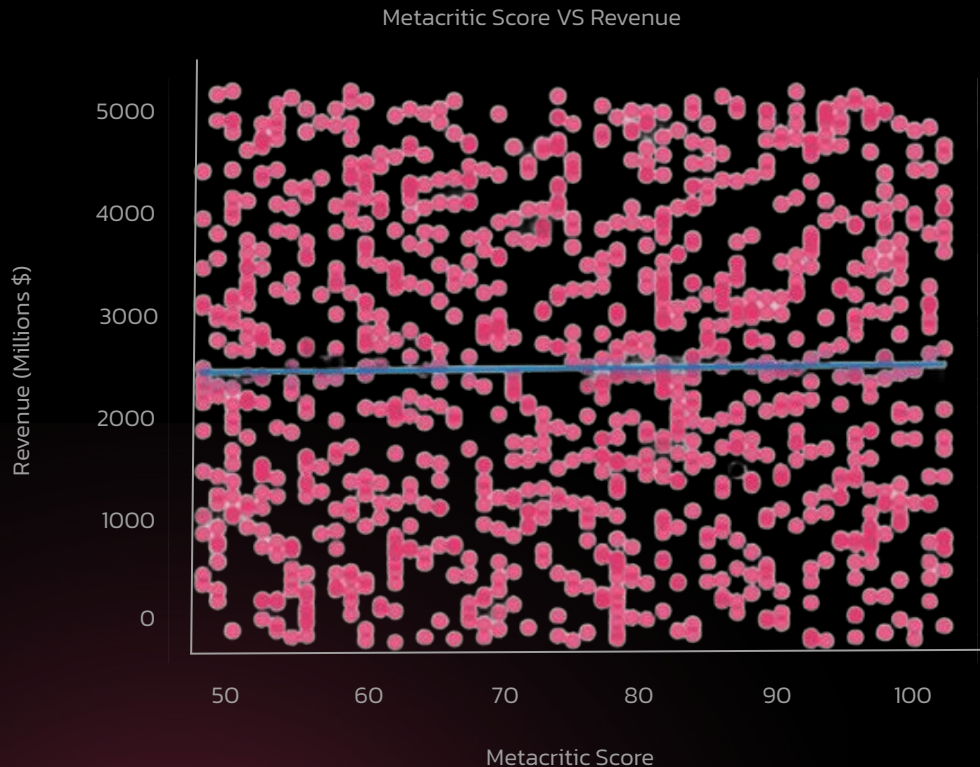
Is there a correlation between Metacritic* score & revenue ?

- The graph shows that there is no correlation between scores and revenues

● Metacritic score

*Metacritic is a platform that combines the average scores from all gaming outlets that give games a review score.

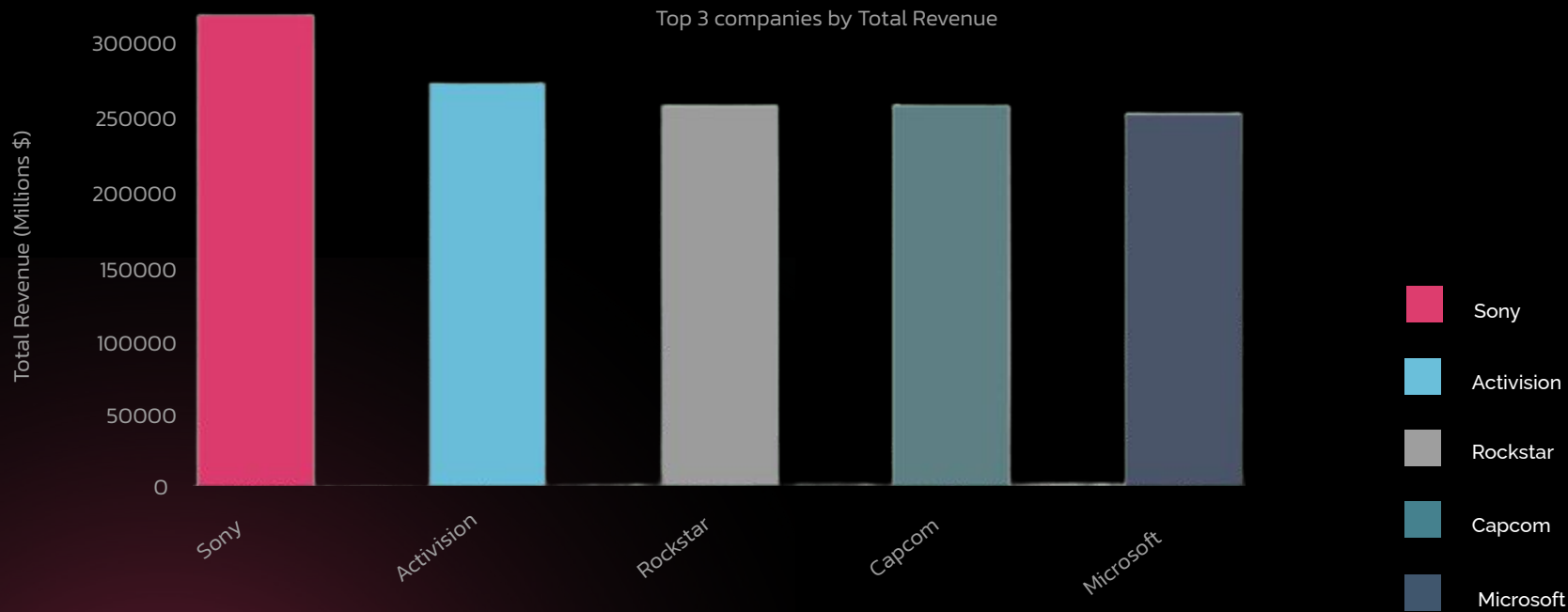# Is there a "threshold" score after which median revenue increases sharply?

Metacritic is a platform that combines the average scores from all gaming outlets that give games a review score.

Median Revenue by Metacritic Score Bin
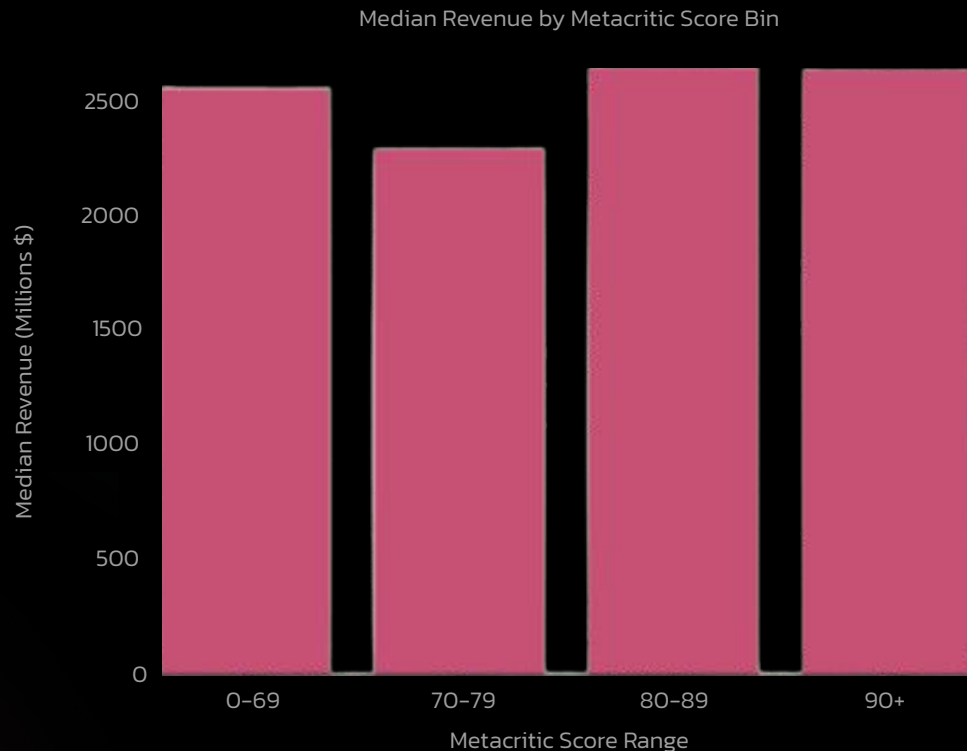
- After 80, median revenue increases sharply
- Cross-platform strategy game is on top 3 genre

Top Developers by Revenue (in millions)

Which companies achieved a Metacritic score above 80 ?

Sony
47

Microsoft
46

Rockstar
45

Square Enix
44

Capcom
44

Major Obstacle

GitHub Coordination

pushing
pulling
env change

but...
No Conflict!

Compiling the Code

Column names
DataFrames

should've...
cleaned df=>
coding !!

Conclusions

Project objective:

The objective of the project is to understand which gaming console, genre most people play and better reviewed.

| Key takeaway 1 | Nintendo Switch had the highest revenue per game, followed by cross-platform. |

| Key takeaway 2 | Games that scored the best in Metacritic added the best total revenues. |

| Key takeaway 3 | Action, strategy, and sports attract the highest total number of players across the gaming industry. |

Insights

Cross-platform

Invest in multiplatforms,
with a
tendency to
Nintendo consoles

Players

PlayStation lead in total
players, followed by
multiplatforms

80% in Metacritic

Sony released 47 games
above 80% in Metacritic

Hypothesis Results

Confirmed

Higher the Metacritic, higher the game sales / revenue

Confirmed

Platform with growing trends over a few years is a good investment

Refuted

Certain genre systematically outperform others

Refuted

Platform with more players generate higher revenue