SWITCHEROO

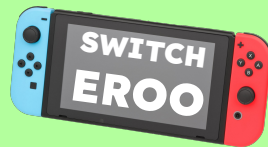The app that helps you find your next favourite Nintendo Switch game

Ana Vigueras
Final Project - Data Analytics
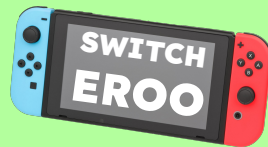Ironhack Bootcamp 2023

Decisions, decisions!

It finally happened. After 100+ hours and a lot of fights, puzzles and whatnot, **you finished your favourite Nintendo Switch game** ❤️❤️🖤

Now what? Contemplating your existence?
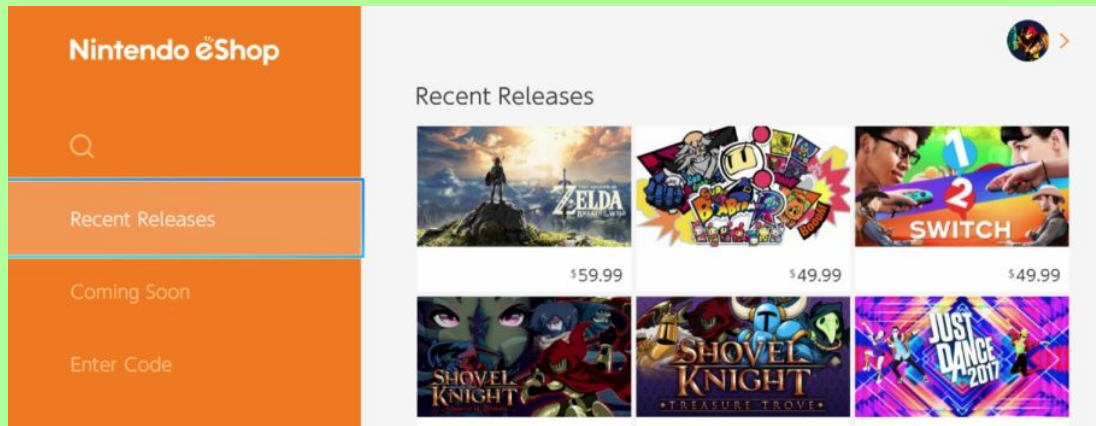Nah, you need to **find another game.**

But not any game, you need to find a **good one™**
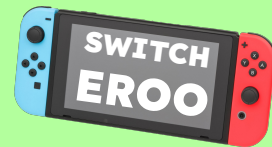
The current situation

Unlike PC games distribution services, Nintendo Switch eShop **doesn't offer personalised recommendations.**

Furthermore, it does **not even show user ratings** and not even a **list of games**! Just recent releases, genre and sales.

It's **hard to make a purchase decision** this way, so you end up spending hours **reading reviews... instead of playing**
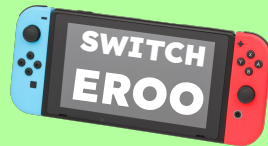
So what now?

You might already know **Metacritic**, a website that aggregates reviews of films, TV shows, music and you guessed it: **video games**

metacritic   search...   GAMES   MOVIES   TV   MUSIC   NEWS   Sign

EDITORS' PICKS

40

LOTR: GOLLUM
Precious? Maybe not. Find out what critics think of today's new Lord of the Rings action adventure game

50

FUBAR
Streaming now on Netflix, Arnold Schwarzenegger's first TV series isn't quite f...ed up, but it is underwhelming

FILM FESTIVAL REVIEWS   **73**

ASTEROID CITY
In theaters next month, Wes Anderson's latest is set at a desert "Junior Stargazer" convention in the 1950s

80

YOU HURT MY FEELINGS
Out Friday, Nicole Holofcener's first feature in five years is a dramedy starring Julia Louis-Dreyfus
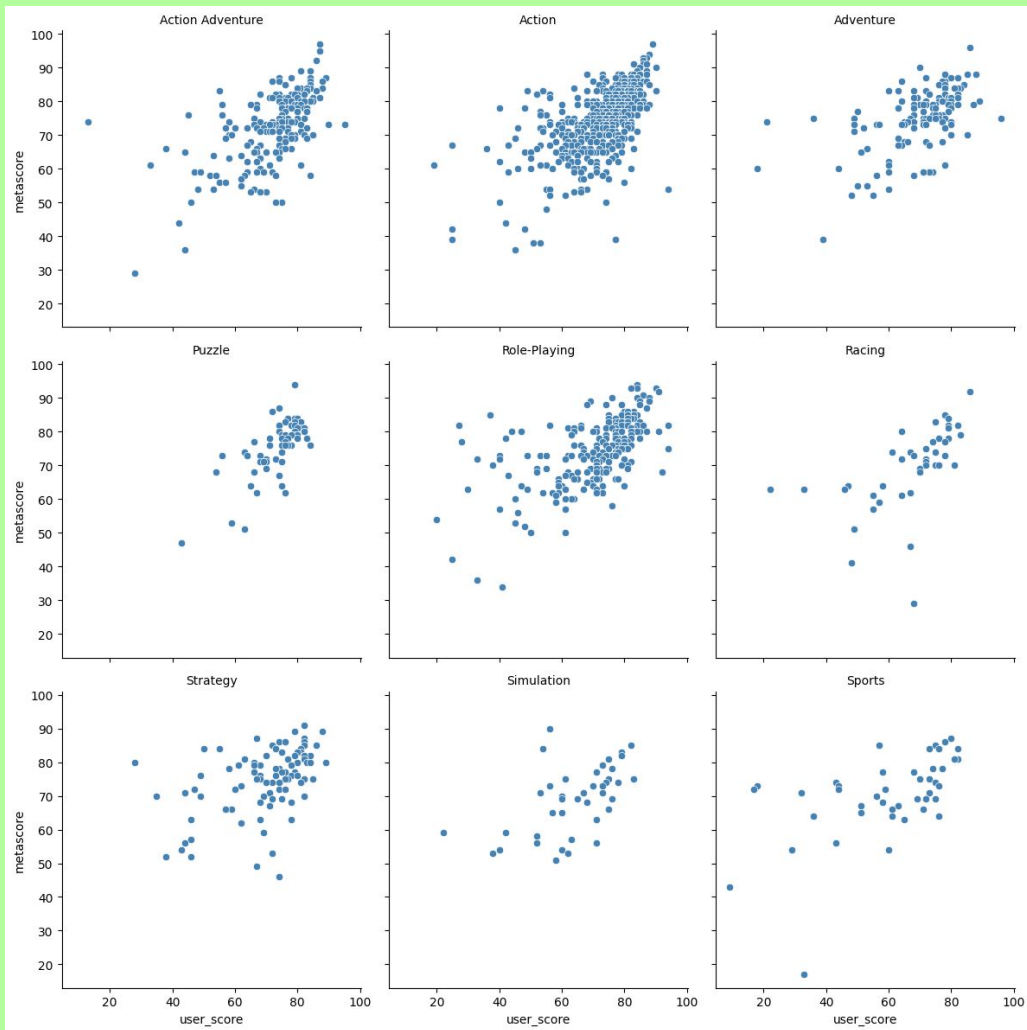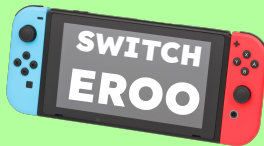
A comprehensive games database

Thanks to scraping Metacritic, we could finally obtain a list of the vast majority of **Nintendo Switch games** (around 1500), together with their **release date**, **user score**, **critic score** and **genre**. The elements we need to take an informed purchase decision.

name	release_date	metascore	user_score	genre
The Legend of Zelda: Breath of the Wild	March 3, 2017	97	87	Action Adventure
Super Mario Odyssey	October 27, 2017	97	89	Action
Portal Companion Collection	June 28, 2022	96	82	Miscellaneous
The House in Fata Morgana - Dreams of the Reve...	April 9, 2021	96	86	Adventure
The Legend of Zelda: Tears of the Kingdom	May 12, 2023	95	87	Action Adventure
...	...	...	...	...
Arc of Alchemist	January 30, 2020	36	33	Role-Playing

SWITCH EROO

Why is genre not enough to decide?

As you can see in these scatterplots, categories like Racing, Strategy and Simulation have a very **diverse ratings range**, and therefore it's a wilder bet to buy one without consulting reviews. Action on the other hand seems more consistent.
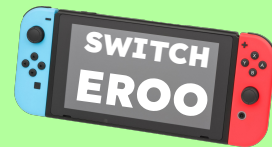
Machine Learning to the rescue

Now that we have a database, the different games are clustered using a 3 different machine learning models:

- **KMeans**
- **DBSCAN**
- **Agglomerative Clustering**

all included in the Scikit-learn python library.

After some testing, the best performing model is **Agglomerative Clustering**, which is a model that recursively merges pair of clusters of sample data. We used Euclidean distance to compute it.

How does Switcheroo work?

```
switch_recommender()

Enter a keyword or a game title you like: zelda    1
Found matches:
0              The Legend of Zelda: Breath of the Wild
1              The Legend of Zelda: Tears of the Kingdom
2              The Legend of Zelda: Link's Awakening
3    Cadence of Hyrule: Crypt of the NecroDancer Fe...
4              The Legend of Zelda: Skyward Sword HD
Name: name, dtype: object                       2
Choose one of the matches by entering its index: 0


Good one! You chose  The Legend of Zelda: Breath of the Wild


If you like  The Legend of Zelda: Breath of the Wild you should try out these:


                                    name      release_date   metascore
260              Endling — Extinction is Forever    July 19, 2022          82
59                            Astral Chain    August 30, 2019          87
315  Bayonetta Origins: Cereza and the Lost Demon    March 17, 2023          81
```
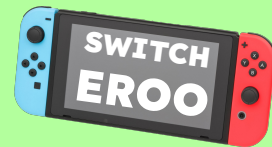
1. Switcheroo asks the user to **input the title or keyword** of their favourite Switch game.
2. It offers a **choice among the matches**.
3. It **gives three recommendations** belonging to the same cluster
4. **Get back to playing**!

Sources and acknowledgements

- **Metacritic** ([Switch games database](#))
- **Kaggle** ([example of extraction of databases](#))
- **Nintendo** (images and the brand Nintendo Switch)
- **Helena,** my cat, for constantly chewing on my notes making it hard to read them afterwards.
- **The instructors** for being the most patient people in the universe
- **My classmates** for the very same thing
- **My willpower** for doing this bootcamp at the time of a new Legend of Zelda launch

<QUESTIONS>

<DEMO>

THANK YOU