Video Game Sales Analysis

Introduction

The video game industry has become a major player in the worldwide entertainment market. This report presents a visualization of the video game sales dataset using nightingale rose charts. The purpose of the visualization is to provide an intuitive and interactive way to explore the video game sales dataset. The visualisation aims to identify trends and patterns in the data and to help users understand which platforms and regions were most successful during the period from 2000 to 2016. More specifically, it is to determine which regions made the most or fewest revenues and which platforms released the most or fewest games from 2000 to 2016.

The video game sales dataset used in this study was obtained from Kaggle[1]. It contains information about video game sales across various platforms and regions from 1980 to 2016. The dataset contains over 16,500 entries and includes information such as the platform, region, year of release, genre, and sales revenue.

Data Description

Column Name	Description	Type
Rank	Ranking of overall sales	Integer; Ordinal
Name	The name of games	String; Category
Platform	Platform of the games release	String; Category
Year	Year of the game's release	Date; Quantitative
Genre	Genre of the game	String; Category
Publisher	Publisher of the game	String; Category
NA_Sales	Sales in North America (in millions)	Float; Quantitative
EU_Sales	Sales in Europe (in millions)	Float; Quantitative
JP_Sales	Sales in Japan (in millions)	Float; Quantitative
Other_Sales	Sales in the rest of the world (in millions)	Float; Quantitative
Global_Sales	Total worldwide sales	Float; Quantitative

To better focus on the recent developments in the games industry, only data from 2000 onwards is analysed. The various gaming platforms are further categorised. "3DS", "DS", "GBA", "GC", "N64", "Wii" and "WiiU" belong to the Nintendo family. "X360", "XB", "XOne" are owned by Microsoft. "PS", "PS1", "PS2", "PS3", "PS4", "PSP", "PSV" are all developed by Sony. Gaming platforms are therefore further classified into four categories: Nintendo, Microsoft, Sony and PC. All these processing parts are done in Javascript.

[1] https://www.kaggle.com/datasets/gregorut/videogamesales

Data Visualisations

Overview:

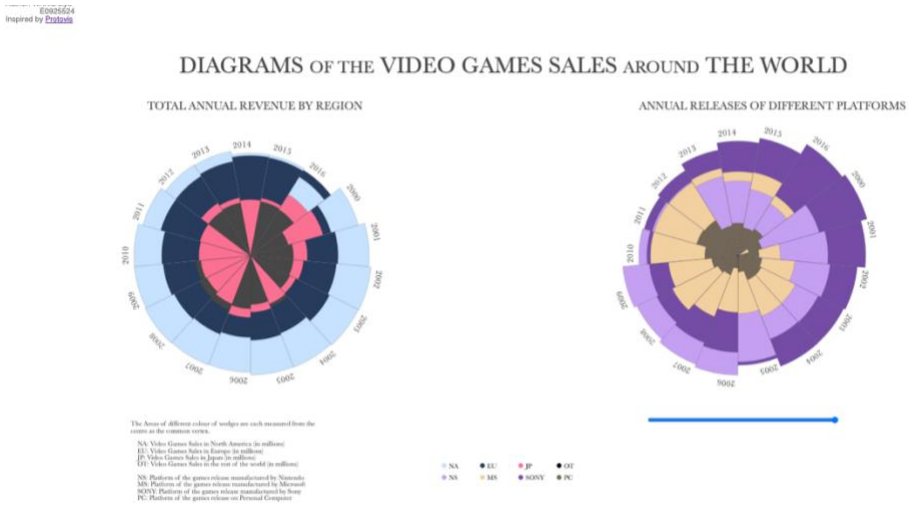

Figure 1 Video Game Sales Analysis

This webpage contains two Nightingale rose charts answering two main different queries: which platforms and regions were most successful.

Nightingale rose charts were chosen for the visualization as they are particularly effective in showing how different variables contribute to an overall total. The concentric circles in the chart represent different variables, and the length of the segments within each circle indicates the magnitude of the variable. Color is used to differentiate between different regions or platforms, and a slider is used to allow users to select a specific year-range to see how the data changes over time.

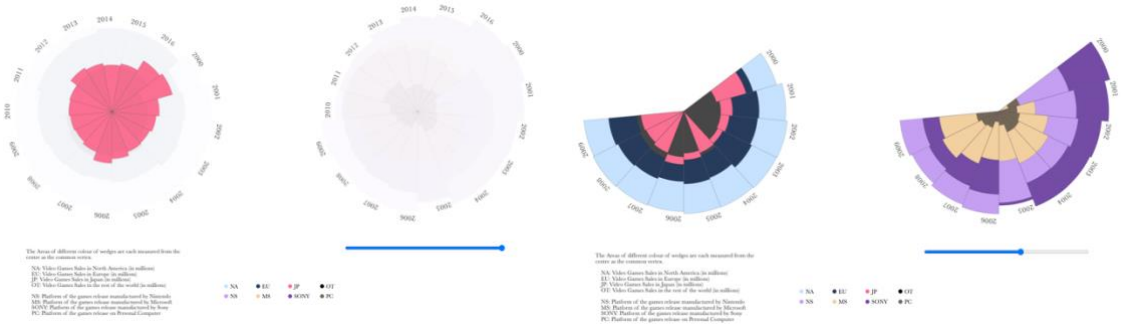

Figure 2 Interactive parts in the charts

The use of color and a slider to select a specific year-range makes the visualization interactive and engaging, making it an effective tool for exploring the video game sales dataset. When users hover over a label in the legend, the chart displays the total number of revenues or games generated for that label.

The Link: [A0248372Y-Masterpiece]

How did the global sales of video games vary during the period?

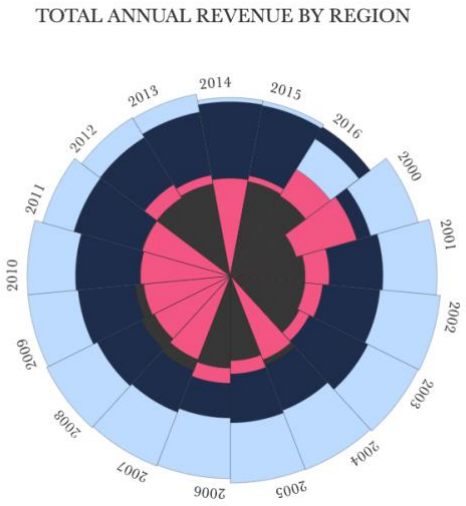

Figure 3 rose chart of the total annual revenue by region

This chart displays the sales revenue generated by each region during the period from 2000 to 2016.

Data	Data Type	Encoding	Note
Year	Ordinal	Position	Each year is represented by a wedge. Each wedge has its own position.
NA_Sales	Quantitative	Color; Size	Each region is represented by a different color. The values of each region by years are represented by the size of the circles (segments).
EU_Sales	Quantitative	Color; Size	Each region is represented by a different color. The values of each region by years are represented by the size of the circles (segments).
JP_Sales	Quantitative	Color; Size	Each region is represented by a different color. The values of each region by years are represented by the size of the circles (segments).
Other_Sales	Quantitative	Color; Size	Each region is represented by a different color. The values of each region by years are represented by the size of the circles (segments).

How did the number of games released on the four main video game platforms change during the period?

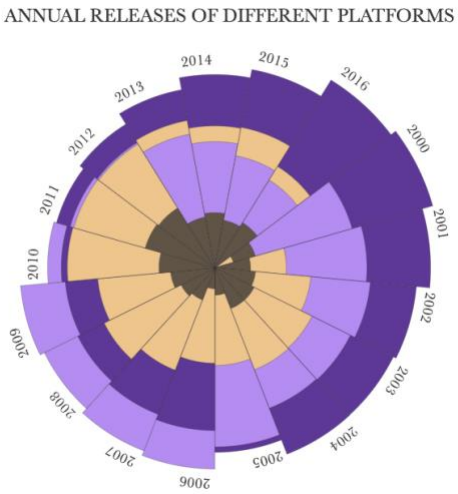

Figure 4 rose chart of the annual releases of different platforms

This chart shows the number of games released by each platform during the same period.

Data	Data Type	Encoding	Note
Year	Ordinal	Position	Each year is represented by a wedge. Each wedge has its own position.
Platform (Nintendo)	Quantitative	Color; Size	Each platform is represented by a different color. The values of each platform by years are represented by the size of the circles (segments).
Platform (Microsoft)	Quantitative	Color; Size	Each platform is represented by a different color. The values of each platform by years are represented by the size of the circles (segments).
Platform (Sony)	Quantitative	Color; Size	Each platform is represented by a different color. The values of each platform by years are represented by the size of the circles (segments).
Platform (PC)	Quantitative	Color; Size	Each platform is represented by a different color. The values of each platform by years are represented by the size of the circles (segments).