**Objective:**

Data visualization using R.

In R, we can create visually appealing data visualizations by writing few lines of code. For this purpose, we use the diverse functionalities of R. Data visualization is an efficient technique for gaining insight about data through a visual medium.

**Dataset:**

We have used video games sales dataset for the data visualization task. This dataset contains a list of video games with sales greater than 100,000 copies. It was generated by a scrape of [vgchartz.com](http://www.vgchartz.com/).

Fields include

* Rank - Ranking of overall sales
* Name - The games name
* Platform - Platform of the games release (i.e. PC,PS4, etc.)
* Year - Year of the game's release
* Genre - Genre of the game
* Publisher - Publisher of the game
* NA\_Sales - Sales in North America (in millions)
* EU\_Sales - Sales in Europe (in millions)
* JP\_Sales - Sales in Japan (in millions)
* Other\_Sales - Sales in the rest of the world (in millions)
* Global\_Sales - Total worldwide sales.

**Why video games?**

Video games always has been the favourite past time and part of the life of teenagers and adults and as the technologies advanced the video game industry has also flourished and expanded its horizon. We have visualized the video games dataset to see the trends in video games and how the different games dominated in different years and how far the industry has come. This dataset contains wide variety and number of video games which helps in visualization of this dataset perfectly. This dataset visualization can be used by the video game companies to see the trends among the gamers. Which will help them to make a decision about which type of games to work on from which they can turn maximum profit.

**Tools / Technologies:**

R studio

Libraries : ggplot2 , readr, dplyr, RColorBrewer, reshape2, gridExtra, scales, tidyverse.

**Plots:**

We have created various type of plots to get an insight of the dataset which includes boxplots, line graph, pie charts, heatmap.

* Platform Count- Count of games launched by various platforms.
* Platform Sales- Sales made by each platform
* Genre Count- Counts of games each genre has.
* Genre Sales- Sales made by each genre
* Release per year- Count of games launched in each year from 1980-2020
* Top 20 publisher- Top 20 publishers and count of games they launched
* Most popular genre per year- Which genre dominated each year by global sales.
* Platform per year- Sales made by different platforms each year.
* Genre per year- Sales made by different genre each year.
* Most popular game per year- Popular games each year measured by global sales
* Genre distribution per year- Popularities of genre over the span of 1980-2020

**Insight/Conclusion:**

The platform which launched the highest number of games is ps2 and ps2 has highest number of sales of all time. Action genre is most popular genre among the gamers which has highest count as well as highest sales among all the genres. In year 2009 and 2010 maximum numbers of games are launched. Electronic arts is the platform with highest number of game launches. Early year were dominated by puzzle and racing games but the recent years are dominated by action and sports games. Wii sports made the highest global sales among all the companies.