

# Econ 3040 - Assignment 1: Sales from different video game consoles

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In this assignment, you will explore the relationships between the global sales and critic ratings of video games, for Xbox One and Playstation 4 (these are two different video game consoles, or “platforms”). The data for your assignment is the same as from [Computer Lab 1](#). The data was scraped by [Abdulshaheed Alqunber](#).

Due date: October 24th, 2023. Worth 3% of your final grade.

Instructions:

- Submit your assignment in the “Assignment 1” drop box on UM Learn. Include your name and student number.
- **You must complete your assignment individually.**
- Your assignment must have two parts: “Answers” and “R Code”.
- For “Answers”, include a sentence, table, or scatterplot. Q.1 and Q.2 will be blank for this section. **Do not copy and paste output from RStudio. Format or type your results nicely.** Make sure all graphs and tables are appropriately labelled.
- For “R code”, include the lines of R code that you used to get your answer.
- For example, for question 5, the “Answers” part should include a picture, and the “R Code” part should include the code used to get that picture.

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Now, here is the assignment for you to work through.

1. Load the data using:  

```
mydata <- read.csv("https://rtgodwin.com/data/vidsales.csv")
```
2. Make a sub-sample that contains only X0ne and PS4 games. **Use this sub-sample for the remainder of the assignment.**
3. Calculate and report the summary statistics for each “platform” in a table (sample mean, sample variance, minimum, and maximum). Also include in the table, the number of video games ( $n$ ) in the sample, for each platform. For example, the table should look something like Table 1.

Table 1: *Sales* and *critic scores* summary statistics, for Xbox One ( $n = ?$ ) and Playstation 4 ( $n = ?$ ) video games.

		sample mean	sample variance	min	max
Sales	Xbox One				
	Playstation 4				
Score	Xbox One				
	Playstation 4				

4. What is the correlation between **Sales** and **Scores**?
5. Draw a scatterplot of **Score** (on the x-axis) vs. **Sales** (on the y-axis), using one colour for Xbox One games and another colour for Playstation 4 games. Make sure the plot includes a *legend*, that describes what the colours mean. (You will need a sub-sample that contains both Xbox One and PS4 games. There are several ways to do this. You could use `&` in the `subset` function, or use `rbind(sample1, sample2)`).
6. How much does it pay to make a *good* game? Try to figure out how much more a video game sells on average, when it has a higher critic score rating. Use the sub-sample that contains both Xbox One and PS4 games.