Turtle games – Project brief

## Overview

To support your team of data analysts, you’ll:

* **Create a Jupyter Notebook (IPYNB) and R script (R):**You’ll analyse the data and prepare a complete Jupyter Notebook and R script that includes key metrics to inform decision-making (e.g. visualisations, comments, and thought processes). Remember to follow good practices in documenting your code intentions and noting your observations and interpretations.
* **Write a technical report (PDF):**You’ll write a report that explains your approach and any insights discovered. It is important to include an overview of your analytic process and the decisions and justifications relevant to a technical audience.
* **Record your presentation (MP4):** You’ll communicate insights to business stakeholders in a recorded presentation. Your submission should contain a video of yourself presenting the insights gained using an appropriate tool (e.g. PowerPoint). The focus should be on presenting the data and insights gained to support decision-making in line with the stated business goals and business questions.

## Scenario

You are part of a team of data analysts that was contracted by Turtle Games, a game manufacturer and retailer with a global customer base. The company manufactures and sells its own products, along with sourcing and selling products manufactured by other companies. Its product range includes books, board games, video games, and toys. The company collects data from sales and customer reviews. Turtle Games has a business objective of improving overall sales performance by analysing and considering customer trends.

To improve overall sales performance, Turtle Games has developed an initial set of questions. You’ll explore these questions in greater depth through the weekly assignment activities. The questions are:

* How do customers engage with and accumulate loyalty points?
* How can customers be segmented into groups, and which groups can be targeted by the marketing department?
* How can text data (e.g. social data such as customer reviews) be used to inform marketing campaigns and make improvements to the business?
* Can we use descriptive statistics to provide insights into the suitability of the loyalty points data to create predictive models (e.g. normal distribution, skewness, or kurtosis) to justify the answer.)

## Access the data

Turtle Games provided your team with two data sets (CSV files) and metadata (TXT file) to ensure that you can perform the analysis needed to complete the assignment. Employ your Python and R programming skills to assist Turtle Games in answering the questions.

* turtle\_reviews.csv – Details on customer gender, age, remuneration, spending score, loyalty points, education, language, platform, review and summary across products.
* metadata\_turtle\_games.txt – Details of the data set, data quality, and reference.