Case Scenario

In the world of puzzle games, there are a number of competitors and products. ER Games is a computer puzzle game development company that has just finished testing a brand-new game which expands on their typical puzzle focus (for the first time, the game is a combination of a puzzle and role-playing… but largely competes against role-playing games). In contrast to its larger competitors, ER Games has sent out several early demos of the game to potential customers to get feedback of the game and to ensure there are no errors within any of the puzzles.

Over the past decade, games developed by small teams of people, rather than by large corporations have had a huge impact on the gaming world. By sending out demos to specific people before the release, ER Games can receive feedback on their game, ensure all the solutions to the puzzles are correct, and specifically determine the gaming demographic that may be most interested in their game. They can therefore develop specific advertising targeting these markets.

ER Games founder James Spier spent years as a consultant before founding ER Games. He is a firm believer in using analytics and data to drive the business. Chaderson believes that the game should be first marketed outside of the US, as data suggests role playing games tend to do better in Asian (namely Japanese) and European markets than US gaming markets.

A consultant ER Games has hired strongly disagrees. In his view, while there is evidence that games do better in Asia than in the US, he believes the game is unique in it's design and should be released internationally, without using a phased approach.

Besides the game sales data, the team also obtain user and critic review data (critic_score, critic_count, user_score and user_count in the console.txt) from a third party site. The user reviews (user_score) usually came from people who have played the game, while critic reviews (critic_score) were collected through various websites online.

Assignment

The company has hired you to analyze the data and build a model(s) which offers insight into decisions and next steps which the company should take from the following objectives:

- How should ER Games ensure they are in line with the trends of the industry?
- Which market besides the US should ER Games target when releasing the game?
- What impact does the changing preferences and demographics of the typical consumer have on the focus of ER Games?

You are expected to analyze the data using the approaches taught in class (Note: You may create some hybrid approaches. For example, applying AB testing based on the KPIs created, or applying classification using proposed KPIs.). As a group you are to decide which methods to use and how to manipulate and analyze the data (you do not need to use all methods).

You are expected to justify the reasons for your decisions in how you've analyzed the data (e.g. why are you using Classification after A/B Testing etc.), as well as reasons for why your models / conclusions are valuable from a business perspective (while using statistics to justify your position).

Your conclusions should explain any key observations and provide a clear vision for decision making.

You are expected to present the following:

- A group presentation discussing your findings, conclusions and recommendations (plan to present for 10-12 minutes, and have a 2-3 minute Q/A). Please stick to the scheduled time.
- Each member of the group must speak.
- Each group member must be able to answer questions.

Data Description

Console.txt

- **name:** The name of the console game
- **platform:** The console the game was released on
- **year_of_release:** The year the game was released
- **genre:** The genre of the game (e.g. RPG, puzzle, etc.)

- **publisher:** The publisher of the console game (typically the company that created the console the game is being released on)
- **na_sales:** Total sales in North America since released
- **eu_sales:** Total sales in the European Union since released
- **jp_sales:** Total sales in Japan since released
- **other_sales:** Total sales in all other parts of the world since released
- **critic_score:** Average score given to the game by a selection of video game critics, on a 1-10 scale, 10 being the best.
- **critic_count:** The number of critics who provided a score
- **user_score:** Average score given by non-critics that have played the game, on a 1-10 scale, 10 being the best.
- **user_count**: Number of users who provided a score
- **developer:** The company that developed (i.e. produced) the game
- **rating:** The ESRB rating of the game
  E: Everyone (appropriate for all ages)
  E10+ : Appropriate for people ages 10 and over
  T: Appropriate for teenagers and older
  M: Appropriate for adults only

Population.txt

- **Country Name:** name of the country
- **Country code:** code of the country used in public data
- **All other variables from 1995 to 2017:** population of country in that year