

Milwaukee Bucks Proposal

Salvin Chowdhury & Mathias Galvan

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1 Proposal Requirements

The requirements for the project proposal is that it must be 1 page long, and must be approved by the instructor. The limit is up to groups of three. The proposal must have the following detailed:

- Identificaiton of the dataset, including the details as well as what kinds of features are there
- Objectives for analyzing the dataset, such as identiying the research question
- Displaying the first ten records of the dataset demonstrating that the dataset can be loaded

2 Milwaukee Bucks Dataset

The dataset to be utilized is the one provided by the Milwaukee Bucks. There are three different datasets, which are named `AccountLevel.xlsx`, `GameLevel.xlsx` and `SeatLevel.xlsx`. Each dataset will be discussed in more detail below:

- **AccountLevel:** this dataset provides details about the accounts of the fans, and this contains information such as the account number, number of single game, partial plan or group tickets, as well as basketball propensity, number of games the fan has attended and other key information.
- **GameLevel:** this dataset provides details about the games that the Milwaukee Bucks have played in, and this contains information such as the the teams that were played against, and if any of those games had a giveaway event.
- **SeatLevel:** this dataset contains information about the level of the game that was attended by the fans, the season in which the game was played as well as the tier of the game.

3 Objectives for Analysis

Using this dataset, the Milwaukee Bucks are considering the introduction of four themed partial ticket plans for the upcoming season:

- **Value Plan:** focuses on affordable tickets for weekday games
- **Marquee Plan Opponent Plan:** featuring games against high-profile opponents
- **Weekend Plan:** highlighting weekend games for fans looking for weekend entertainment
- **Promotional Giveaway Inclusive Plan:** centered around games with promotional giveaways

These plans are aimed to cater to the diverse fan interests and purchase behaviors. The challenge is to leverage the historical ticketing data to predict the likelihood that a account will purchase one of the new partial plans and which plans the fans are most likely to purchase.

Research Question: How can historical ticketing data be used to predict the likelihood of an account purchasing a specific themed partial ticket plan, and which factors most influence fans' preferences for each plan?

4 Team Members

The team members working with the Bucks datasets will be Mathias Galvin & Salvin Chowdhury. Tasks include making the data card, performing data pre-processing, analysis, visualization, modeling & prediction.

5 The First Five Records

To prove that the dataset can be loaded and be used to extract useful information to answer the research question, we display the first five observations from each of the three datasets. The images of the datasets are being loaded up into a pandas dataframe, as well as using `.head(5)` to display the first five observations.

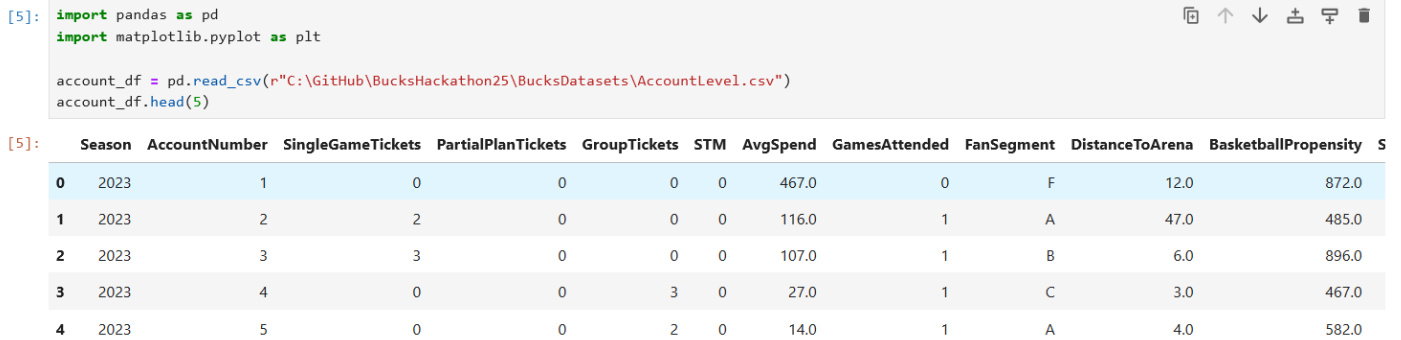


Figure 1: Loading Up AccountLevel



Figure 2: Loading Up GameLevel

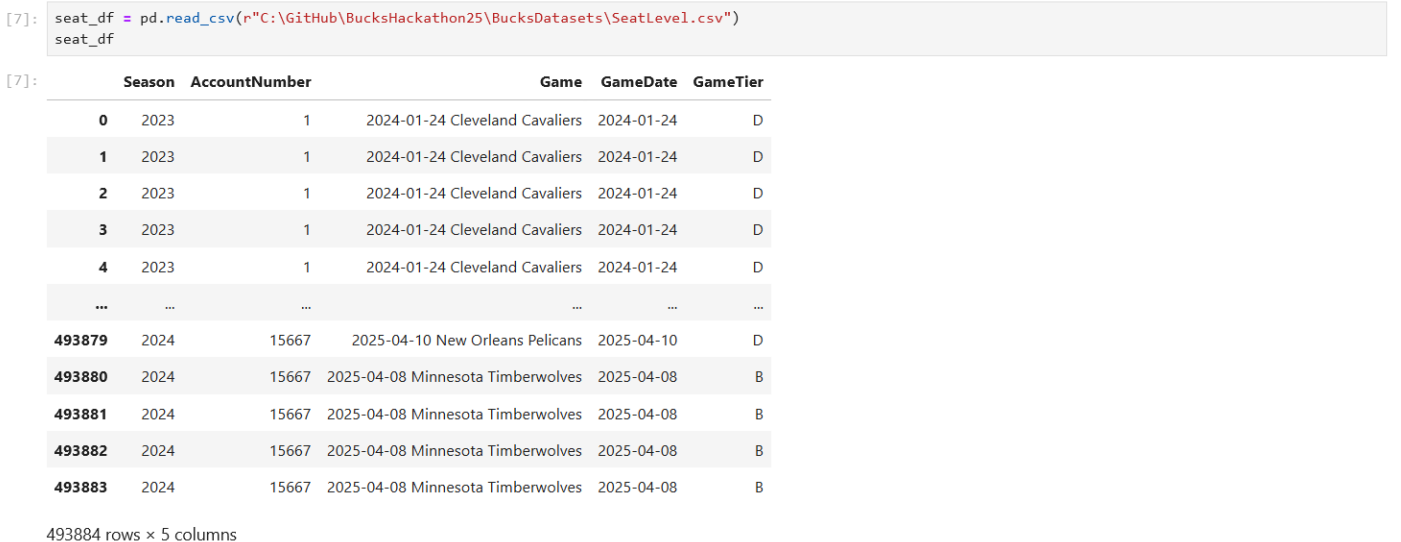


Figure 3: Loading Up SeatLevel