Heroes of Pymoli Analysis

Analyzing Game Data Purchase and Demographic information with Pandas

Based on this data we can conclude a few things. We have a decent group of players, 576, who purchase games items with the average price of the item being $3.05. We see that the players who purchase items skew male with males representing 84% of the players purchasing items. We cannot extrapolate if more males are playing the game as a whole; we can only conclude more males are purchasing game items. Since males are purchasing the most items, they are making up the most revenue for sales of game items. The average purchase price and average total purchase price per person who is not a male (female or other/non-disclosed) average out a little higher than their male counterparts. Due to the increased purchase count on the purchases by males, that means there’s more cheaper purchases decreasing the averages. Without more data and/or calculations, we cannot make any definitive conclusions on what that kind of behavior is driving purchasing.

When breaking down the players into age brackets, the bulk of the players are between 15-29 with the majority being between 20-24. The 20-24 group is also making the most purchases, and the 15-19 and 25-29 categories are the next largest groups. The average purchase price between all three groups is close in number for the 20-24 and 15-19 group, and the 25-29 group is slightly less with less discrepancy than the gender groups. The average purchase prices do vary widely amongst the rest of the age groups. The average total purchase per person, is higher amongst the 20-24 group than the 15-19 and 25-29 group. It is not the highest as that is the 35-39 group. However, in comparing it to the other two highest player count age groups, it shows that the 20-24 age group has a higher average total purchase per person despite the average purchase price being comparable to the other two groups. We can conclude that this group is more likely to make more purchases compared to the other two. There are a lot more people in the 20-24 group, so more data looking into the purchases might be needed for a satisfactory conclusion. The average total purchase

The top spenders have only made 3-5 purchases, and they have spent between $13 and $19 dollars. The top spender with 5 purchase at $18.96 is also the player who made the most purchases. We can conclude that players are not making many purchases. They’re only likely to make a few. No player is making continuous purchases. Data regarding how long they’ve played the game and when they’ve made purchases would be helpful to determine what kind of player makes a purchase. Are the players who make a single purchase still playing the game? Did the players who made several purchases do that in a small time frame or was it stretched out over a period of time?

It is also good to know that the average total purchase per person (by gender and age) is never more than $5.00. The average total purchase per person by gender was between $4.07 and $4.56, and the average total purchase per person by age group was between $3.19 and $4.76. The top spenders are definitively outliers amongst the players. It is also good to know that when comparing the total count of sales to the unique number of sales to an individual, the majority are only purchasing something once. Considering that the most expensive item is $4.99, it stands to reason that the majority of the sales are one-time purchases. There would need to be more analysis to conclude if the majority of multiple purchases are over $5.00 and are the minority, or if the majority of multiple purchases are for cheaper items and less than $5.00.

The top two most profitable items and the most profitable items are the same item. Item 92 (Final Critic) and 178 (Oathbreaker, Last Hope of the Breaker Storm) have almost the same number of sales. The top one, 92 (Final Critic), has just one more sale, but is also priced slightly higher giving it a bigger total purchase value. The other top three for most profitable and most popular have one item in common, Item 145 (Fiery Glass Crusader) with 9 sales it is the fourth most profitable but the third most popular. The total amount of sales overall is 780, and with these two items being at 13 and 12 sales, that is only 1.6% and 1.5% respectively. They’re popular, but there is not a lot of data to say what draws a player to a specific item. There are 179 unique items. There is a lot of room for variability with these items for purchases. We cannot make any conclusions as to whether a player would pick the most popular or profitable item due to the odds being so low. They’re more likely not to pick the item.

Overall, we can conclude that the majority of players who are purchasing items for this game are male and are likely in the 20-24 age group if not the 15-29 age group. A player is most likely to make a single purchase with the purchase under $5.00 as no single item exceeds $5.00.