

Business Report

Dina El-Kholy - 201601463

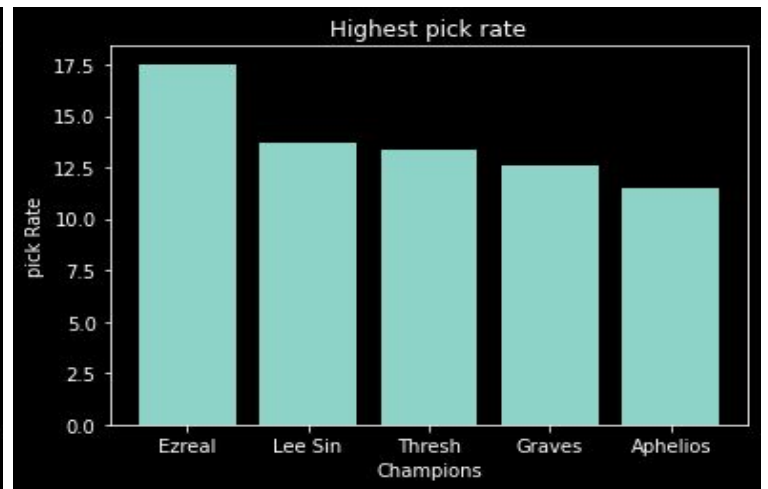
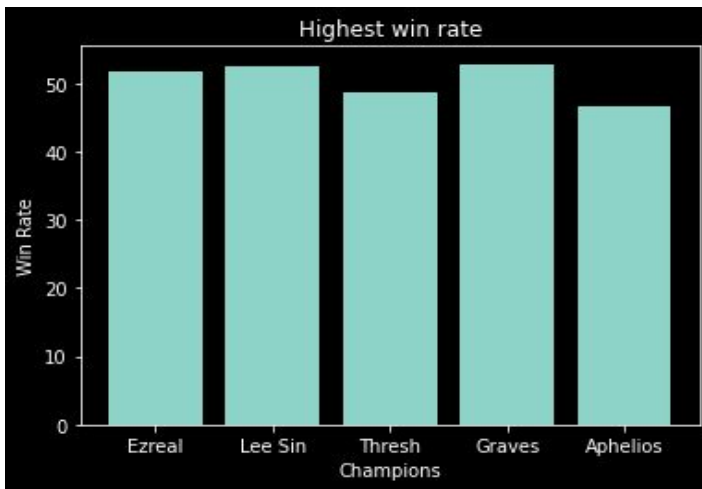
What is League of Legends?

League of Legends (LOL) is a multiplayer online game in which two teams, each with five participants, fight against each other. Each participant in the game possesses a unique champion to fight with. Each champion has different characteristics and strength points. Each participant gets to choose different items and spells to help him/her in the game. One of the two teams wins if its participants were able to destroy the other teams' Nexus. In this report, I will discuss the findings and insights from analyzing the game's data.

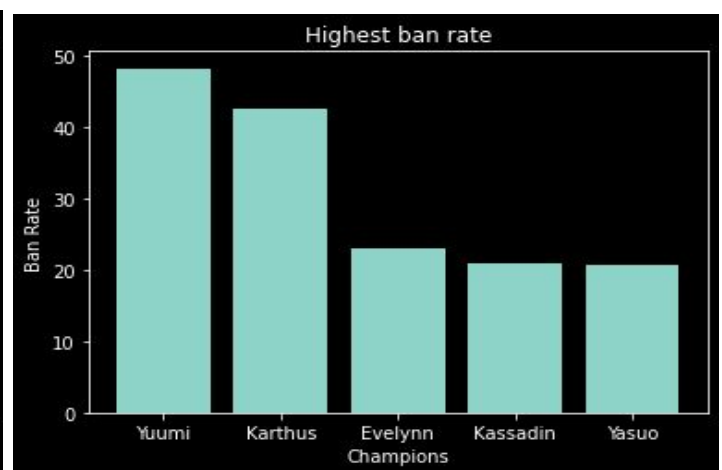
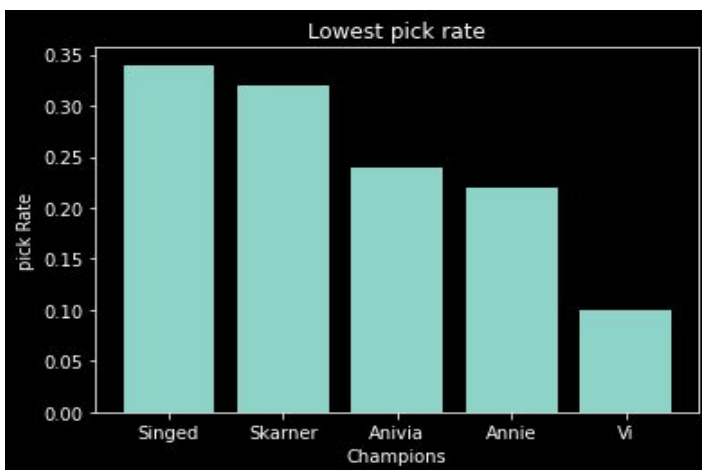
Insights inferred from the data:

League of Legends' policy is that it is a free and fair game. A champion winning should be a 50% chance.

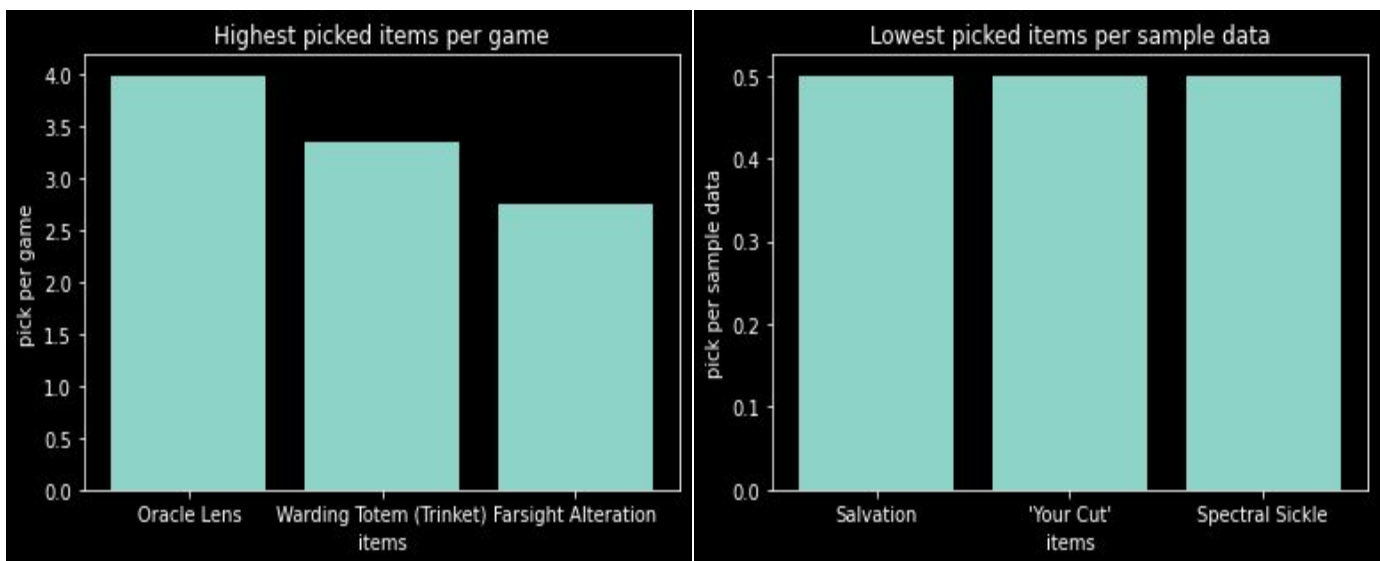
- While investigating champions' data:
Ezreal was found to be the most popular champion (most picked by the players) with a pick rate of 17.52% and a win rate of 51.65% in 1754 matches. The next most popular champion was Lee Sin with a pick rate of 13.7% and a win rate of 52.37% in 1371 matches. It seems that the pick rate is directly proportional to the win rate as the order of champions in both is nearly the same. Also, the least picked champions usually have low win rates. The pick and win rates for the highest 5 champions are illustrated by the graph below.



- Now, let's check the relation between the pick/win rate and the ban rate. Are the least picked champions usually banned? The graph on the left shows the least pick rates while the graph on the right shows the most banned champions. The highest bans and the lowest pick rates are not equivalent (not expected). Surprisingly, Yuumi (the most banned) was picked 7.19 % of the time (not that low). Also, Singed (the least picked) has a low ban rate of 0.13%. One may infer that champions are picked based on personal preference (shape, certain power, ...etc) or based on a synergy factor. Moreover, the participants get what champions work with whom and ban what they do not want.



- Another important component of the game is the items each participant chooses. The following findings about the game items were inferred from a small sample of the data and may not be representative; hence more data is needed to be sure. During investigating this small sample of data, some items were found to have a very high average pick per game. For example, an average of four items out of seven in the games, the oracle lens item is chosen. Also, the oracle lens item was the most chosen item per sample data. On the other hand, some items were barely picked once or never picked. For example, the salvation and spectral strike items were chosen only 0.5% of the time for the whole data.



How can one use these insights?

These insights are useful to understand the game's participants more to keep the game fair and enjoyable. For example, knowing that most of the participants use a certain item while not using another item at all is questionable. This may imply removing an item or introducing new features to the game to keep it more diverse.

Further relations to investigate:

1. The relation between the ban rates and the counters of the champions in the game.
2. The relation between the pick rate and the items available for the champion.
3. The relation between the ban rate and the synergy between champions.