FINAL PROJECT MILESTONE
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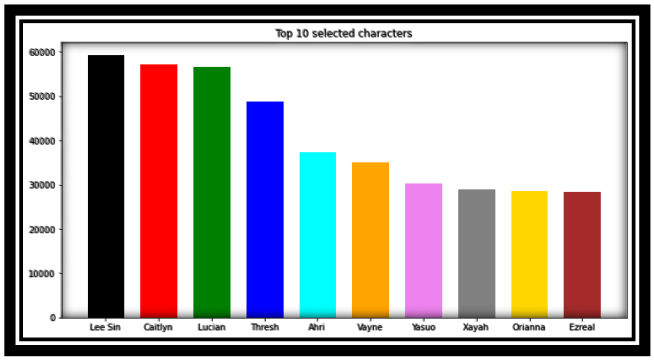
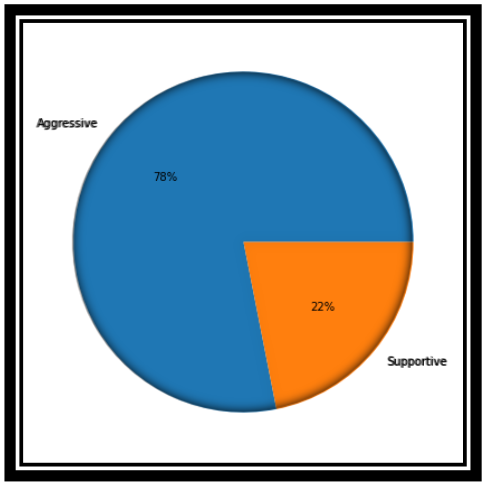
ABSTRACT

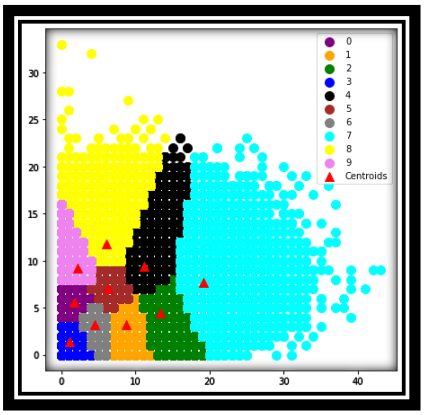
In our milestone, we have progressed about visualization, machine learning method and collaboration. We started using GitHub Desktop for push and pulling project as a team. It made easier to work on same project. We started with getting datas from our dataset and matching datasets each other. These are important for connect the datasets and get the most accurate results. Then, we decided to champion's game styles with by looking their class. For example, while warriors are categorized as aggressive, tanks are supportive. Also we visualized the most popular and most feared character distribution using bar chart.



The most important is aggressive and supportive character rates. We visualized this rates using pie chart.



If to mention about machine learning, we research the k-Means logic and usage for datas. Then, we applied to our datas and we got a distribution about stats. We made inference about players game styles.



1. MOTIVATION

We are working on how the selfish or supportive choices of the players affect the fate of the game. Also we will examine this choices and their stats how affects the results of the different games. These games are trend in online world. People playing and watching them excitedly. Also players spend remarkable time for these games. But people's selfish game styles can negatively affect the result in MOBA games. We wanted to examine this situation specifically through data. We think that people's real-life characters are reflected in the way they play. Therefore, this research will also help us analyze the characters of the players. For this reason, our topic is very interesting. Also we are interesting with questions like : which type of characters do the players prefer, how do these choices affect the results of the games, do similar combinations in different games give close results, which characters are commonly chosen?

2. DATASETS

In first step, we used datasets about League Of Legends. Datasets include LoL games, champions, stats, matches statistics. Our datasets available in this links:

- https://www.kaggle.com/datasnaek/league-of-legends?select=games.csv
- https://www.kaggle.com/paololol/league-of-legends-ranked-matches?select=participants.csv

- https://www.kaggle.com/uskeche/leauge-of-legends-champions-dataset

We used the loc method for choosing columns in dataset. Then we applied head method for get top values in datas. Then we needed merge different datasets for decide champion's types as aggressive or supportive. For this reason, we used pandas merge method.

3. METHOD

We decided to use k-Means clustering method for learn players game styles like aggressive or supportive. Firstly, we get datas about players kill, death and assist stats for each match from our datasets. Then we applied k-Means this datas and got a distribution. In this distribution, we have different regions. Some them represents the game styles which we interested in. If players have lots of kills and few assists it means their style is aggressive. On the other hand, if players have lots of assists and few kills it means their style is supportive. We used this technique for cluster players kill/assists then decide the game styles.

4. REFERENCES

[1] https://towardsdatascience.com/k-means-clustering-algorithm-applications-evaluation-methods-and-drawbacks-aa03e644b48a

[2] https://towardsdatascience.com/machine-learning-algorithms-part-9-k-means-example-in-python-f2ad05ed5203

[3] https://www.javatpoint.com/k-means-clustering-algorithm-in-machine-learning