BIG DATA

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Team Members

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Idea:

The data analysis is essential for Esports team as each team has their own analysis team

So here we will analyze every team performance on each map in valorant game .

It's very popular game and the tournaments in it sometimes have prize pool 2 million .

Solution:

We analyzed each round type to know the vulnerabilities of each team so if I am coach of the team, I will try to fix these problems and build new tactics.

We analyzed agents' selection and performance, so to know who to buff or nerf as this is important to make the agents equal powers and don't make any agent overpowered.

In other side if I am a coach of a team and don't use this agent, I will try to adapt my tactics with this agent to win matches.

We analyzed players so in the transfer window If I am a manager in a team, I will look to the data to know ho to buy and who to sell.

Data preprocessing:

To know every round type and number of wins and losses in each team there was a json column in rounds section I extracted it and wrote it in dictionary so I can access it with keys and counted every rounds wins and losses for each team and the keys were the team name and round type.

If there was a null row in the dataset I fill it with the average value.

Models:

Head shot prediction model: I used a prediction Model with linear regression to know from (kills, death, assists) the headshots accuracy.

Accuracy: 0.55

Precision: 0.48

Recall: 0.56

F1 Score: 0.52

Agent Model: based on (kills, death, assists, first kills, first deaths) I predict the agent. I used random forest classifier.

Accuracy: 0.20

Precision: 0.18

Recall: 0.20

F1 Score: 0.18

Agent plus minus prediction: based on agent column, I predicted the minus plus (the agent has kills more than deaths), I used logistic regression.
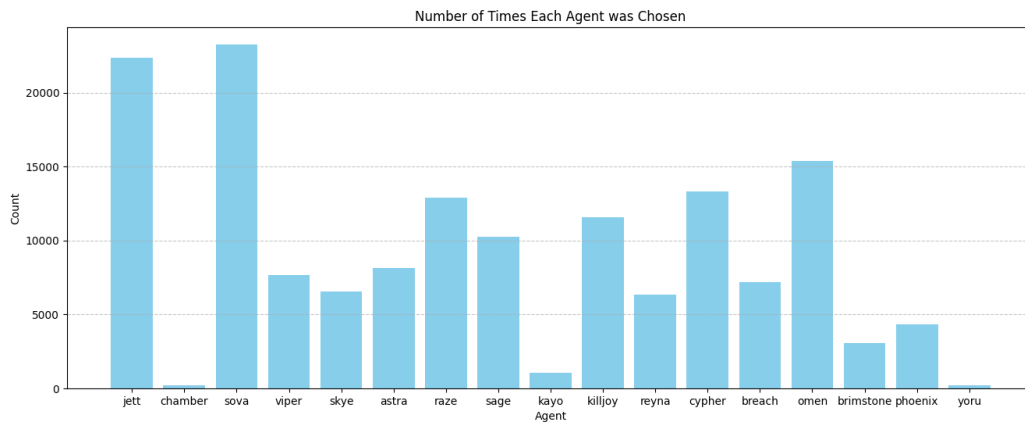
Accuracy: 0.60
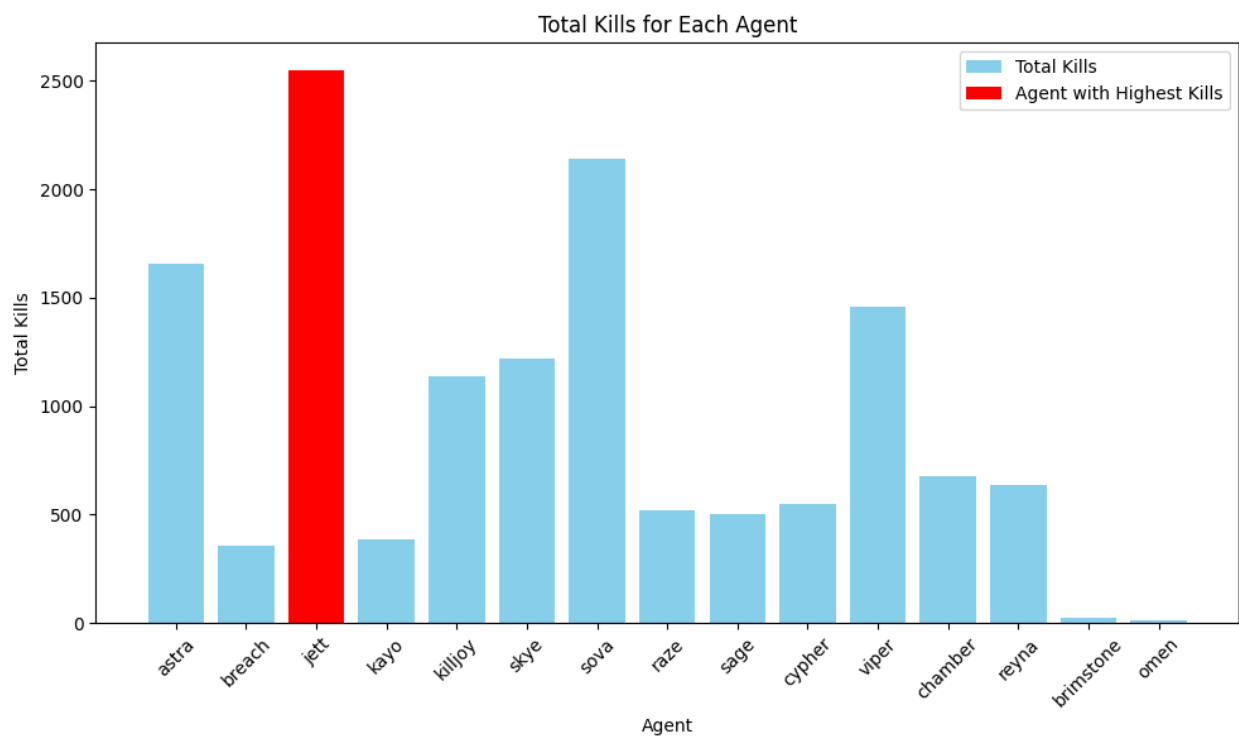
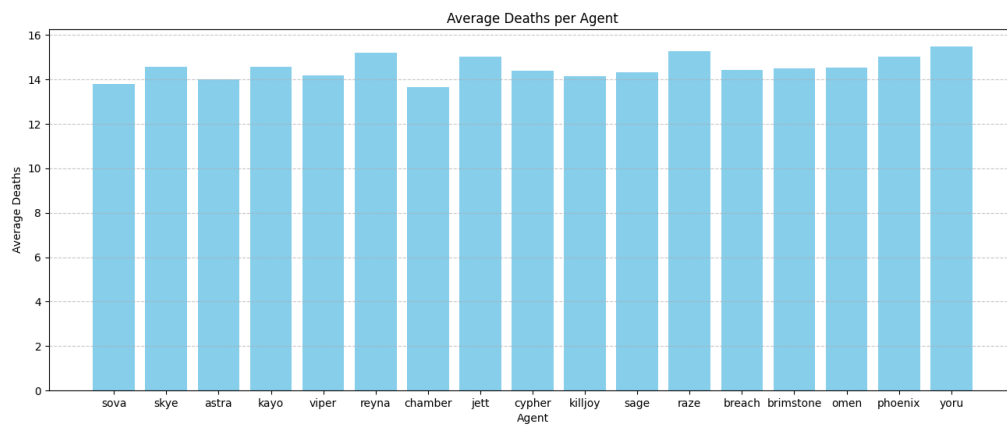Precision: 0.54

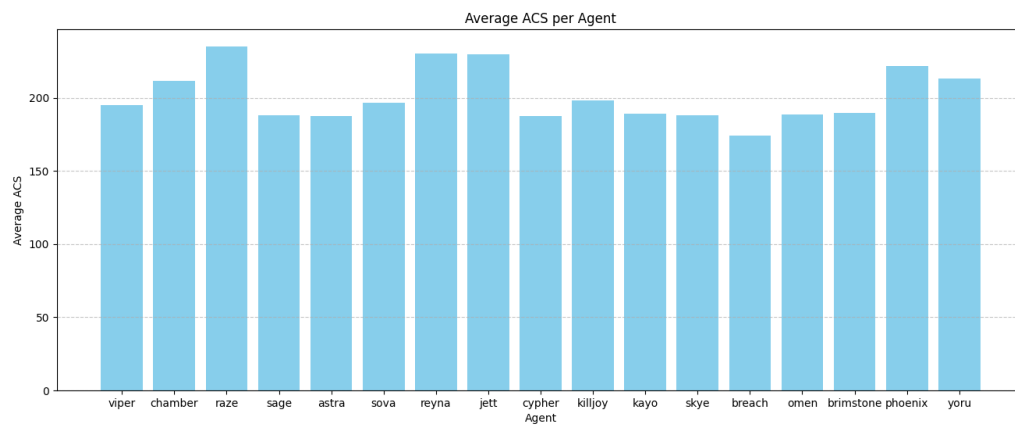Recall: 0.30

F1 Score: 0.38

Some Visuals:

Most picked agent

Number of Times Each Agent was Chosen

Total kills for each agent:

Total Kills for Each Agent

Avg death per agent:

Average Deaths per Agent

Avg ACS per agent:

Average ACS per Agent

Correlation between headshots and number of kills

Correlation Between Average Headshot and Number of Kills

Best teams pie chart:

https://drive.google.com/drive/folders/1Ui1ndwKQ5olC3E7jLBupl9u9M8cIrt4w
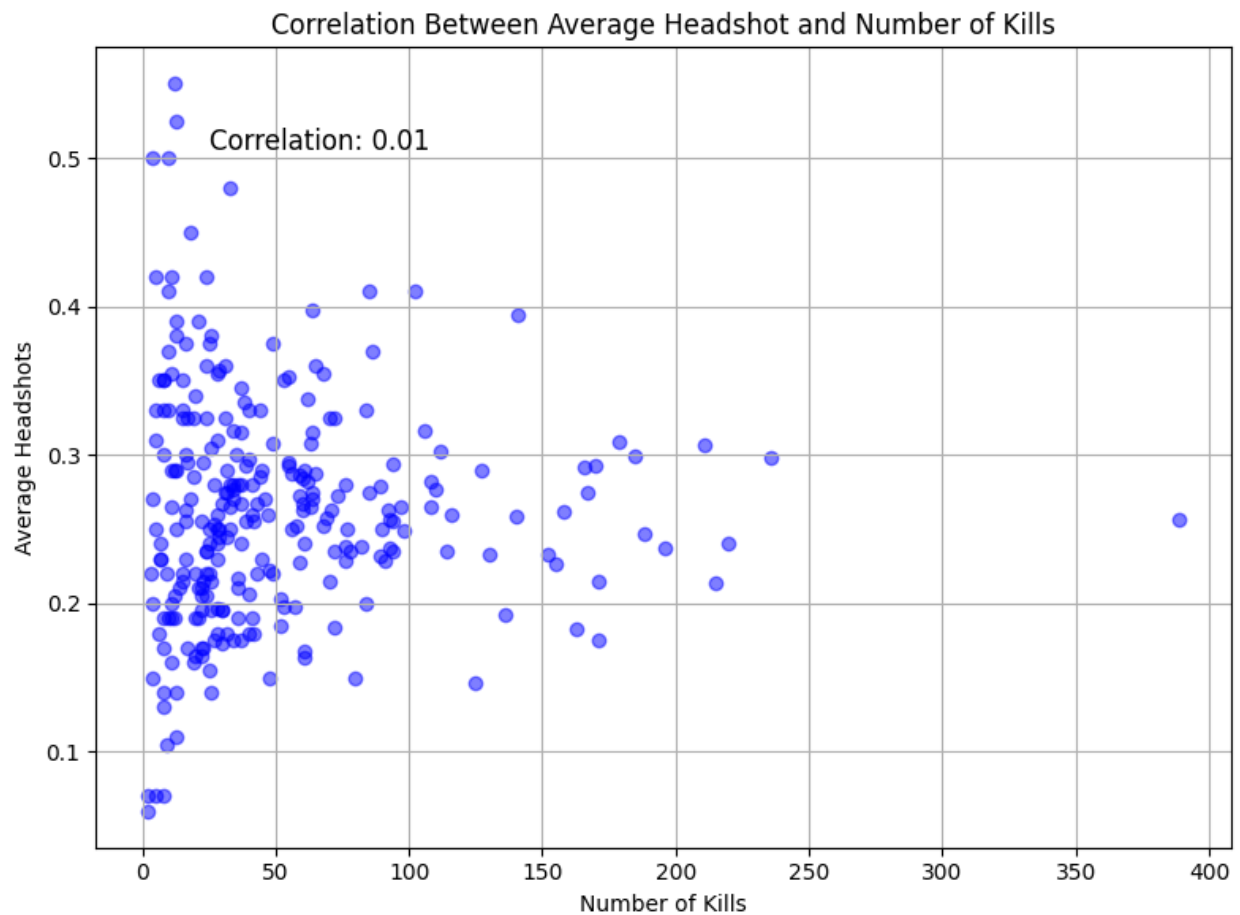
teams pie chart:

https://drive.google.com/drive/folders/1lIQhFzj-eOLZGwWEcO5wi7CSUZHhmXB7?usp=share_link