Introduction

What is Valorant? Valorant, produced by Riot Games in 2020 it is a hit 5 v 5 First Person Shooter game that tests the patience and reaction time of a player. An average rundown of the game consists of 5 people per side which are known as the Attackers and the Defenders. The attackers are given a bomb from which they have to plant so that it explodes which lets them win the round although this might seem simple enough it really isn't. Now on the other side are the defenders, their main goal of the game is to prevent the attacker from planting the bomb, however, if they do manage to plant the bomb then the next goal of the defenders would be to defuse the bomb. Now what makes this game interesting is that while either the attackers or defenders try to achieve their goal, they also have to try to not get killed by the enemy players. One crucial death can change the course of the game forever. However, gunplay isn't everything, what sets this game apart from many other games alike is that each player has a unique set of abilities that can either benefit the team or benefit themselves. Currently, it has one of the fastest gaining players and has around 650,000 active players every day. Valorant made by Riot Games comes with many obstacles but is also a game loved by many.

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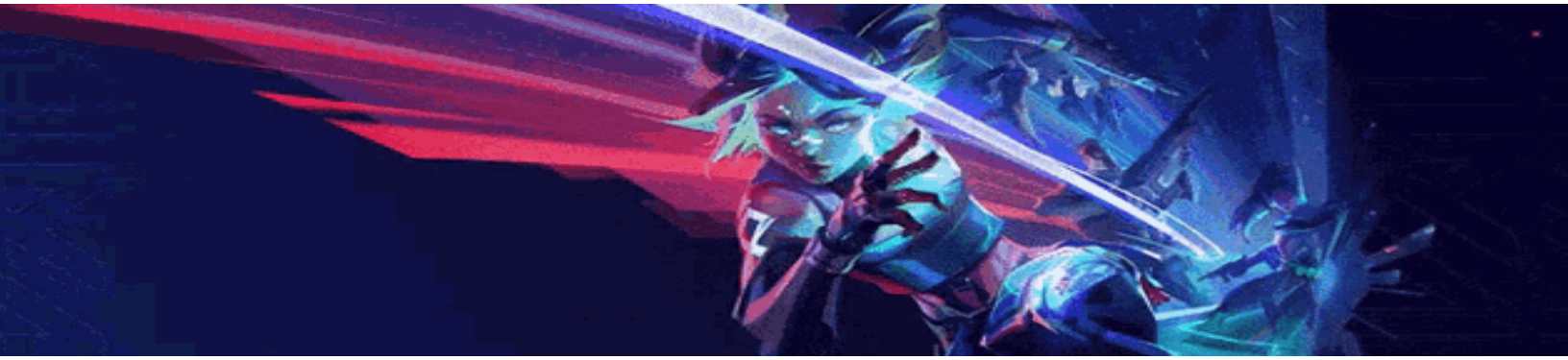
Central Question

Given that Valorant has a competitive nature and players that would like to climb the ranks and possibly go pro, we can ask ourselves Do certain weapons within valorant perhaps give players a higher chance at winning gunfights than other weapons? For example: If player A had a Vandal which costs 2,900 ingame creds and Player B had a Judge which costs around 1,850 in-game creds, now seeing that the Vandal costs significantly much higher than the Judge we can presume that Player A would win the fight; however what if I told you that Player B won the gunfight over and over again with the same gun. Do these vital issues destroy the balance of what Valorant tries to demonstrate as "High-Risk High Reward" Now if a 1,850 cred gun keeps on killing a player with a 2,900 cred gun then what's the point of purchasing the higher-cost weapon? All of these issues are related to in-game balance.



Data Sets

Valorant Leaderboard Statistics | Kaggle
Valorant Weapon Stats | Kaggle
EDA of Valorant Game | Kaggle
Valorant Esports | Kaggle

All of these data sets have Tabular data and represent and are .csv files. They present information that accurately corresponds to the Central Question as they show data of how many top players get killed with x gun.

Which Data Set Do you intend to use?

I intend to use all of them as they allow me to come to my conclusion with a better understanding. Although if I had to choose one it would be EDA Of Valorant Game | Kaggle

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Outline

Given these data sets and the proposed question, the main focus would be to collect the average amount of gun kills per gun, the average amount of body shots depending per gun the rank of the player to determine their skill level, the rounds they won, comparisons of different guns, the most used gun on a specific map, the most used gun with a specific agent, and the win to loss ratio with the specific gun on the specific map. Also, it would be beneficial to add a comparison feature for each of these functions to determine the difference between gunA and gunB. With all of this information, we can come to a better understanding and most likely a conclusion to determining if some guns are much better than others.

Possible Functions:

- most_used_gun(data) #Returns the most used gun within all the files
- average_picked_gun(data) #Returns average picked gun within either data set
- average_body_shots_per_gun(gun) #Returns average body shot of the gun
- rounds_won(player) #Returns the number of rounds won by the Player
- avg_rounds_won_per_gun(gun, map) #Returns avg rounds won of specific gun
- avg_rounds_loss_per_gun(gun, map) #Returns avg rounds loss of specific gun
- rounds_lost(gun) #Returns the number of rounds lost with the gun
- rounds_won(gun) #Returns amount of rounds won with the gun
- average_agent(data) #Returns average agents players used
- win_to_loss(gun, map) #Returns the W/L of guns from the chosen map
- differenceInGun(gun1, gun2) #Returns the difference with guns from prev functions
- averageMap(data) #Returns average Map players play
- popularMap(data) #Returns the most popular Map
- unpopularMap(data) #Returns the least popular Map
- playerWins(player) #Returns the number of wins a player has
- playerLoss(player) #Returns the number of losses a player has
- most_used_gun_map(map) #Returns the most used gun on a specific map
- average_used_gun_map(map) #Returns the average used gun on a specific map
- least_used_gun_map(map) #Returns the least used gun on a specific map
- player_bodyShots(player) #Returns the body shots a player has
- toString() #Converts numbers, lists, etc into strings

Note: *more functions will most likely be created that weren't listed here*

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