

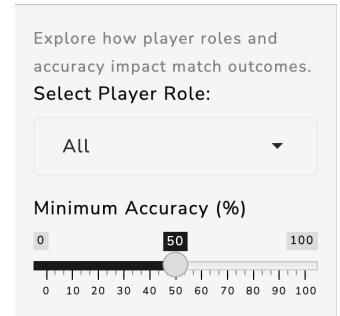
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**Stat 436**

## Project Overview

In recent years, sports analytics have crucially changed how we understand professional sports, and this is now happening in the world of E-sports too. This homework will look at a dataset from various e-sports tournaments to see what actually impacts being successful as a team. While most people primarily focus on which team won the match, this dashboard lets us understand the reasons why by looking closer at shooting accuracy % of five different player roles. I chose this topic because e-sports data is often very messy and hard for a regular person to understand given all the context. My goal is to take these stats like KDA (Kill/Death/Assists) and put them into a context that shows how different playstyles of different roles impact the team.

## Filtering & Interface Design

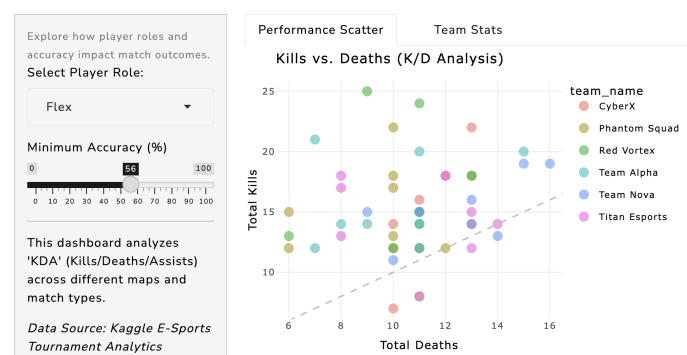
To make the data easier to explore and analyze, I built two ways to filter the information. First, I included a dropdown menu to select player roles. This is crucial because a Sniper and a support player have completely different roles, so looking at them together doesn't always make sense especially when it comes to KDA. Furthermore, I added a slider that filters players based on their shooting accuracy. By moving the slider towards the right, you can instantly see if players who are the most accurate actually get the most kills.



For visual style, I chose to disregard the basic white and gray theme with R and chose a theme called Lux. I chose to select this theme because it provides a clean and professional look that makes the data easier to read at a glance. Since e-sports datasets can be filled with numbers, the crisp font and spacing of Lux helps prevent the screen from being cluttered. I also included labels and descriptions to the dashboard allowing non-gamers to still understand what the charts are actually showing without needing to see the data beforehand.

## Findings & Analysis

After messing around with the data, I found a couple things that I did not expect. You would think that having a higher accuracy would indicate having the most kills. However, when you filter data for the Flex role, the scatter plot shows that many players with average accuracy actually have more kills than the people with perfect aim. This suggests that in competitive tournaments, being in the right



place at the right time might be more important than having great accuracy.

Another interesting fact is that the team with the most total kills did not always win the most matches. By using the summary table, I saw that teams that focused more on playing the objective rather than eliminating the most opponents. This shows that strategy is more important than individual shooting skill, which is an insight that is not shown on the scoreboard.

## **Technical Details**

From a technical perspective, I made the app very efficient by using reactive expressions. Instead of filtering the data for both the plot and table, it filters it at once and sends the data to both places. This keeps the app fast even if the dataset were to get way larger. I also hosted the data on GitHub making the app more portable and usable on other computers without having the raw csv data. This makes the code much easier for someone else to run and test without having to change file paths.

[Link to R Script](#)

