ppshift machine learning

In this document, we will be discussing methods of obtaining a credible way of classifying difficulty in VSRG maps. We will first establish what makes a map difficult, then we build from there!

Part I
Difficulty

What makes a map difficult, what is a difficult map? Could it be the following? The map was difficult because of ...

1. Failing
2. Combo Breaks
3. High Stamina Requirement
4. Low Accuracy

We discuss all of these scenarios and we will choose one to tackle, possibly integrate the other options into our calculations in the future.

1 Failing

The most significant way that we can readily control if players fail is via **Health Drain** in which most VSRGs will implement. However, this value is inconsistent and will not provide useful information on higher **Health Drain** values due to lack of players passing certain maps.

2 Combo Breaks

Combo Breaks analysis is another method that isn't consistent, whereby "chokes" can be random and combo breaks mainly can only determine the **hardest** points on the map, it doesn't depict a difficulty cure.

3 Stamina

While stamina is a good way to look at difficulty, it can readily be derived from accuracy, which is conveniently what we'll be looking at next

4 Accuracy

This is the best way to look at difficulty, because not only it gives us a figure, it tells us the story and correlation between **accuracy** and **patterning**