

Assignment 1 - Data Visualization in Tableau

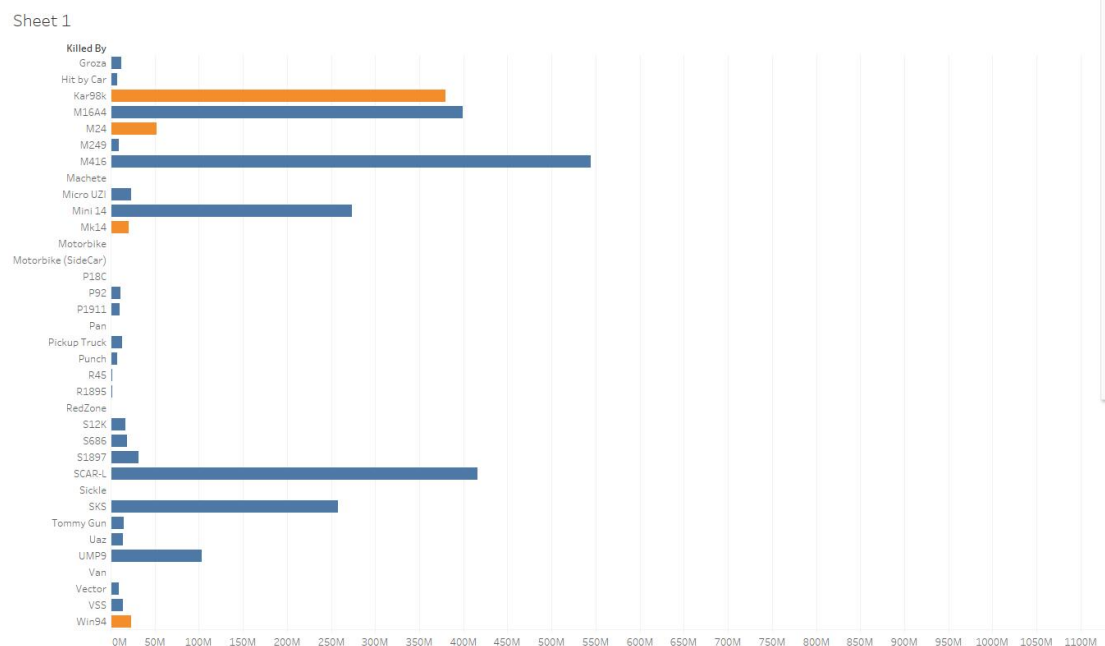
Yuxuan Qiu

Here is the Sniper Rifles list:

AWM, Kar98k, M24, Mk14, Win94

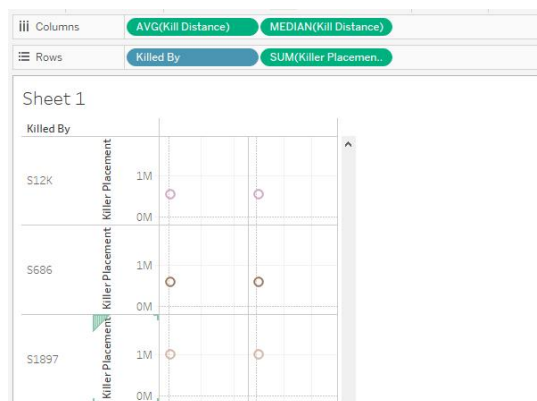
1A:

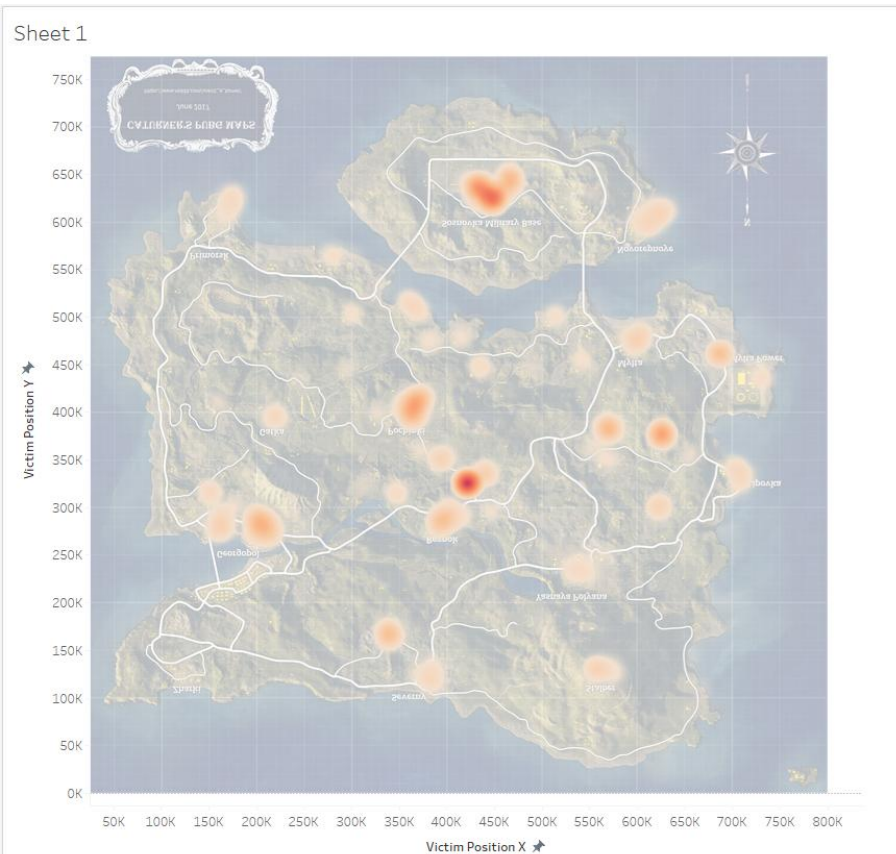
To answer this question I create the Kill Distance calculated field and by comparing Sniper Rifles and other weapon Kill Distance, I found that **[M16A4, M416, Mini 14, SCAR-L, SKS]** had shown the great range as Sniper Rifles.



1B:

Based on my observation, the differences for each weapon between median and average kill distance are mostly around **2000-3000**, not for all. And for the short gun class, their kill distance is same base on their location, and it match their short but powerful property, compare with other weapons with variety kill distance and 2000-3000 difference.



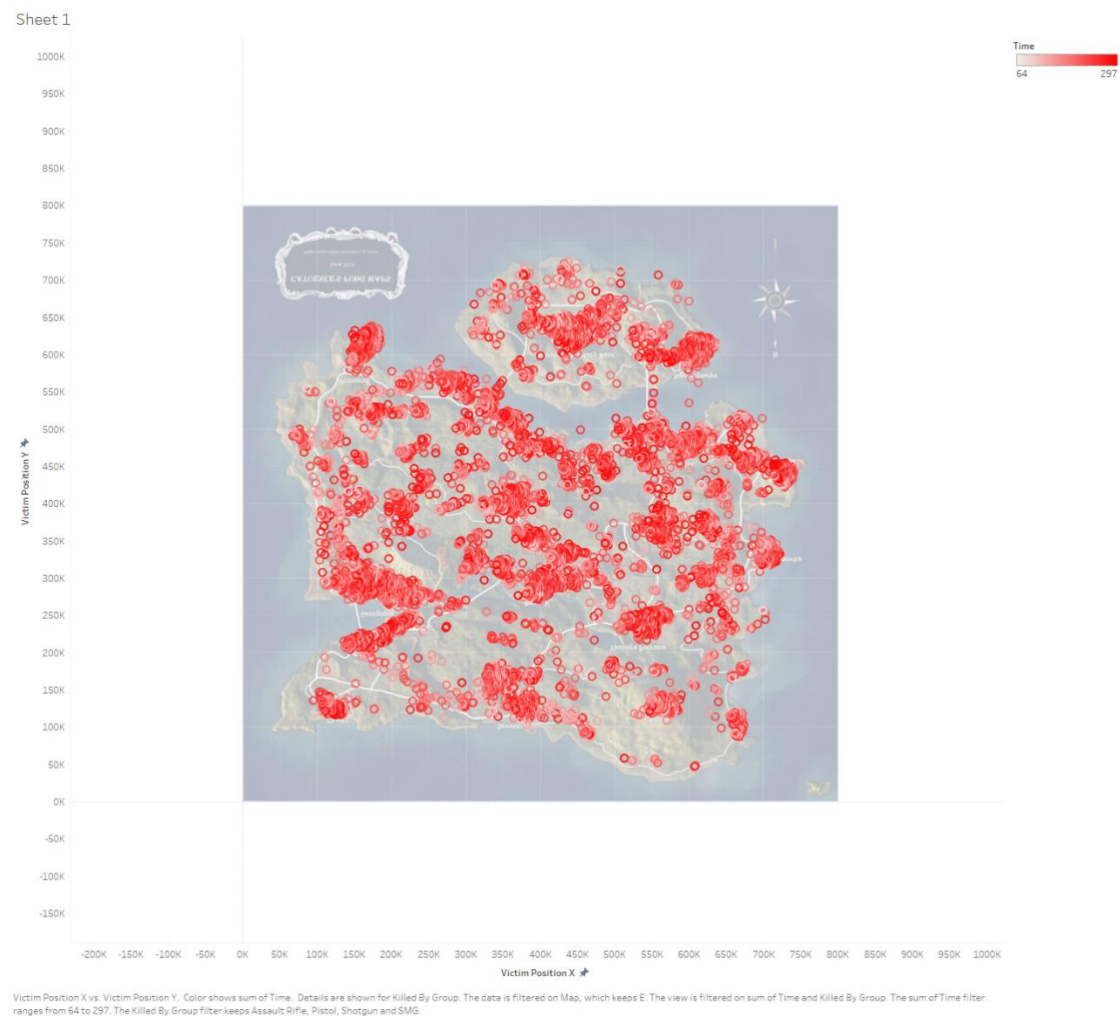


2A.

2B: By zooming in on one of the hotspots on the map, I made an observation by adjusting the time and found that comparing the time period of 0-299 seconds, the number of people density is a certain decline in the time period of 300-900 seconds, and since the color I set is red so, in the time period of 300-900 seconds, the hotspot area I chose showed a significant FADING phenomenon. I think this indicates that the initial 0-299 second time period represents the initial time of the game when player deaths are most likely to occur. That is, the high density of combat usually found at the beginning of the game. As the game progresses, a number of players are eliminated, thus causing the 300-900s time period to show a decrease in player density. Also as time passes, players usually begin to shift locations away from the original high density areas to relatively spread out wilderness areas. Therefore, in the 300-900s time period, the number of deaths in the wilderness areas increased significantly. Also I found that in high density areas, the most common cause of death was dominated by the four medium and close range weapons, Assault Rifle, shotgun, pistol, and SMG. Instead, long-range weapons such as sniper rifles are uncommon, partly because high-density areas are mostly urban-based, where close-range weapons tend to have more of an advantage in narrow streets and hallways, while sniper rifles are more suited to open areas in the field. Or further research could be done to study the success rate of long-range weapons. The goal would be to prove whether long-range weapons have a stronger ability to win in the final stages of the game.

2C: The following picture supports my observation, which is that the Assault Rifle, shotgun,

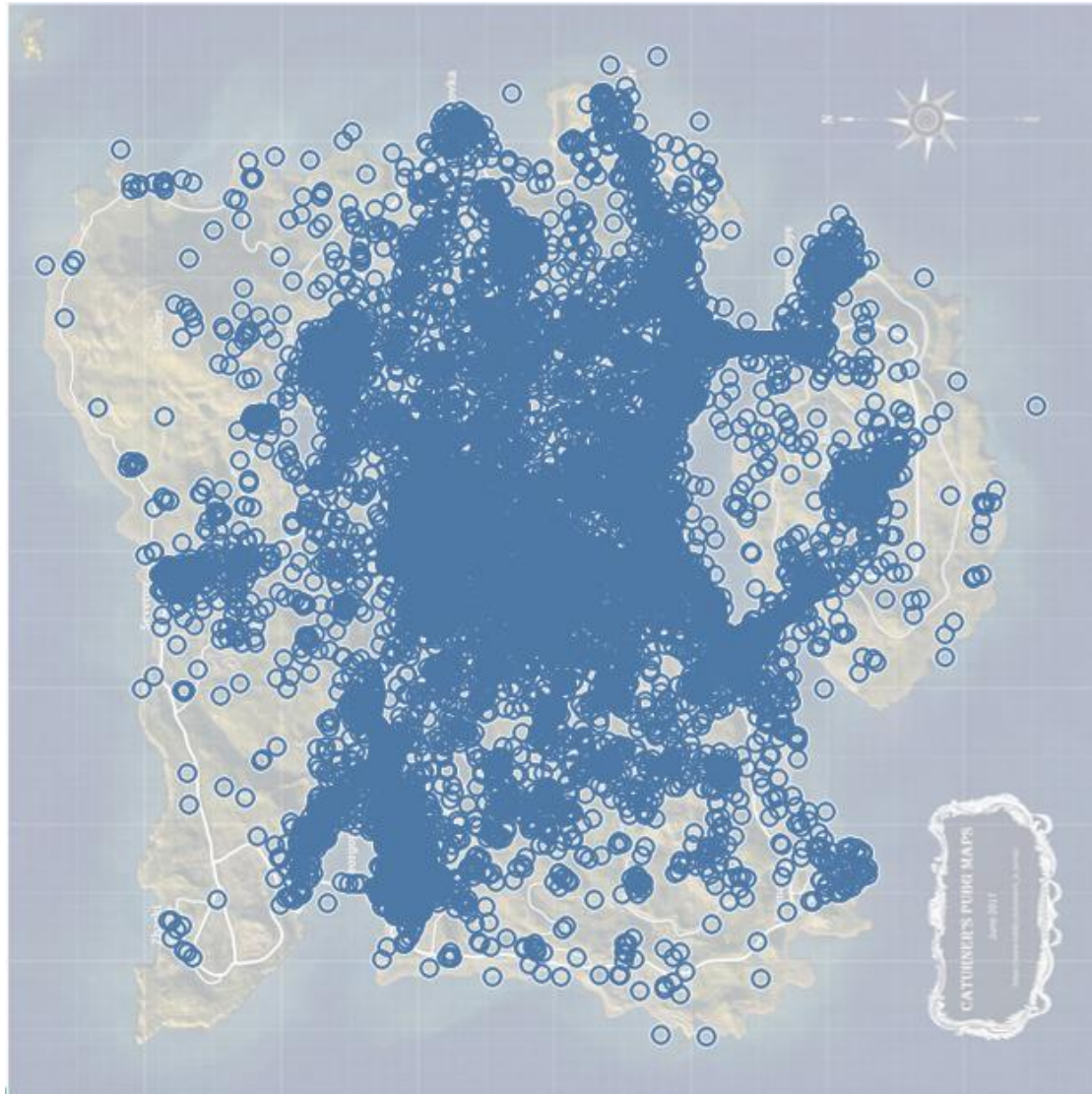
pistol, and SMG are the four weapons that are being used regularly in high density areas, which leads to high density deaths.



3A. From what I've found, at 120s, a ring pattern is present, which means that at the beginning of the game, players land in various areas of the map, forming a circle-like enclosure. The initial ring pattern reflects the distribution of players during the early phases of the game as they land and disperse across the map. And as time passes, at 240s, there is also a dissolved phase, which is a sudden decrease in the number of players, and this represents the end of the initial phase of this game, caused by a large number of players dying. At the beginning of the 720s stage, a clear centralization of the player's location began to appear, and based on the player's death location, it was found that the player's death location began to shift towards the center of the map. And this situation continued until the 1800s when the death locations became less dense. For this phenomenon, I think the reason for this is firstly that the inner areas of the map usually have more equipment and resources. However, after the player has gone through the initial 240s dissolved phase, the player will leave the original area and head to a new area. As the poison circle shrinks irregularly, but usually towards the center of the map, the distribution of players' deaths on the map tends to concentrate towards the center of the map from the 720s phase onwards. By the 1800s stage, which is often considered the final stage of the game, the poison circle

starts to become very small and random, meaning that it may not be limited to the center or inner areas, but may shrink towards the edges. Of course it is also possible that the location of the poison circle changes due to the position of the surviving players. However, from the 1800s onwards, the location of player deaths begins to become less centralized, and player deaths begin to appear at the edges of the map.

Before:



After:

