DSC 106 Project by Ruoyu Hou

League of Legends Game Stats

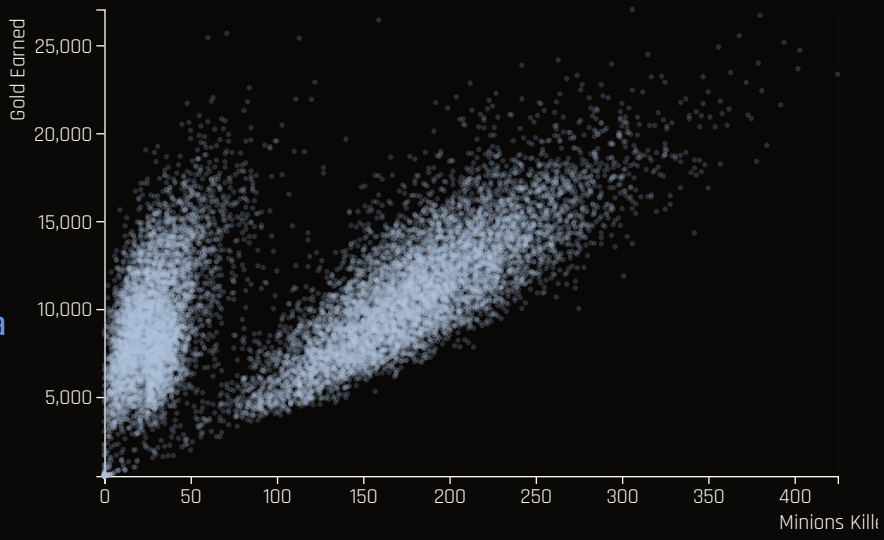
Challenger League, Ranked Solo

Game data from 3/05/2023 to 3/12/2023, retrieved from Riot API.

1.

Total Gold v.s. Minions Killed

Per Game, North America

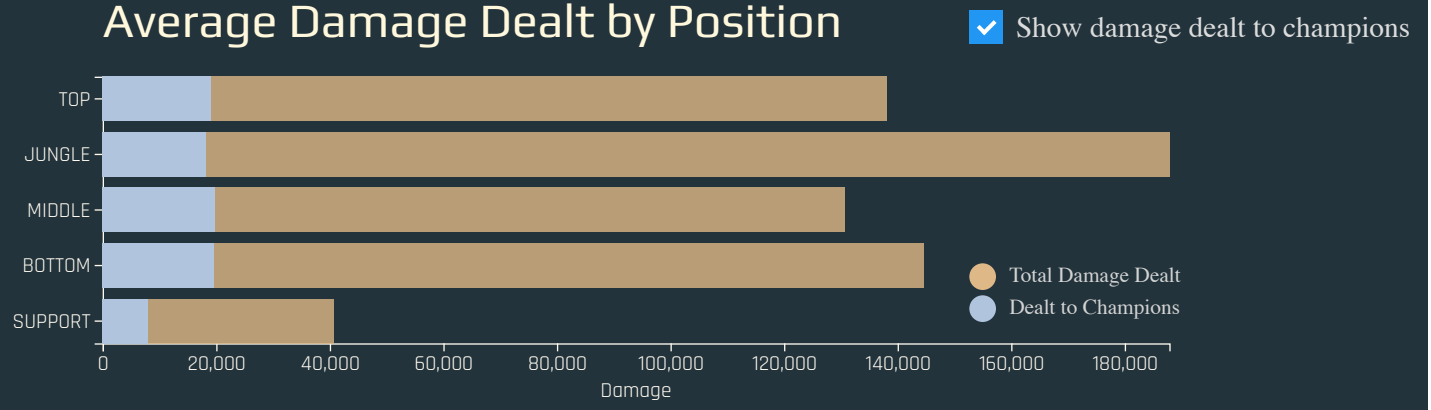


Choice of color scheme: scatter dots: *lightsteelblue*, title: *cornflowerblue*; axes: *white*.
Marks and channels: only *circles* for the dots.
Other design considerations: The opacity of the scatters are set to 0.2 to be helpful to identify the density.

Plot 1 shows that the total gold a player earned in a game can be reflected by the number of minions killed (CS) (althought there are many other activities earn gold). Therefore, we can have a guess on how a player would perform in a game later by observing his/her CS in the early game. Note that there are two slopes, which implies that the left cluster (or line) may refer to support players.

2.

Average Damage Dealt by Position

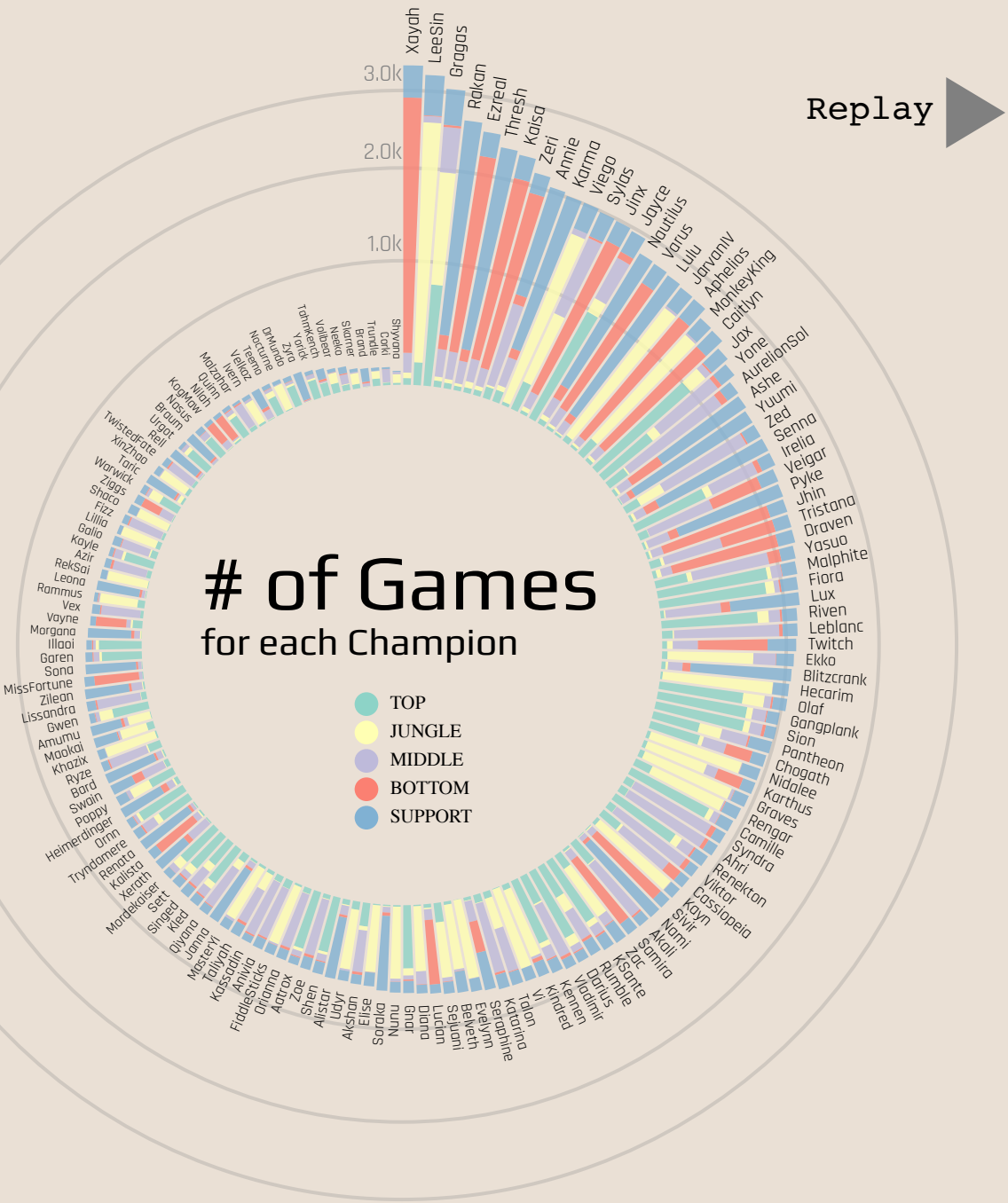


Choice of color scheme: bars: *["burlywood", "lightsteelblue"]*; title: *cornsilk*; axes: *white*.

Marks and channels: marks: *lines*; channels: *color hue* for identity channel (categorical).
Other design considerations: The opacity of the scatters are set to 0.2 to be helpful to identify the density. Also, there is a checkbox for toggling on/off displaying the damage dealt to champions.

Plot 2 shows that support players usually deal least damage but maybe often provide more utility. Damages of other positions dealt to champions are clos while junglers have a significantly higher damage to other objects (e.g. dragons, barons, turrets). From the plot, we can see that damages to champions on count as a minor part of the total damage in a game. That is, team fights are only a part of the game, and we need more strategies on map resources and laning/offense/defense strategies.

3.



Choice of color scheme: bars: *d3.schemeSet3*; title: *black*; axes: *grey*.
Marks and channels: marks: *lines* (bars); channels: *color hue* for identity channel (positions are categorical).
Other design considerations: The orientation of x-axis is set as radial and sorted by the total number of games of that champion. Since there are 162 champions, a circular plot can nicely arange all the bars and help us search or compare.

Plot 3 shows us how popular each chamipon is in recent games, and may help us analyze the strength of each single champion or combos of several champions. For example, Xayah and Rakan are a typical pair of bottom partners, and they take the first and 4th position on the plot, meaning that they are strong bottom in this patch, and maybe other players should focus on the bottom lane when their allies or enemies go Xayah and Rakan.

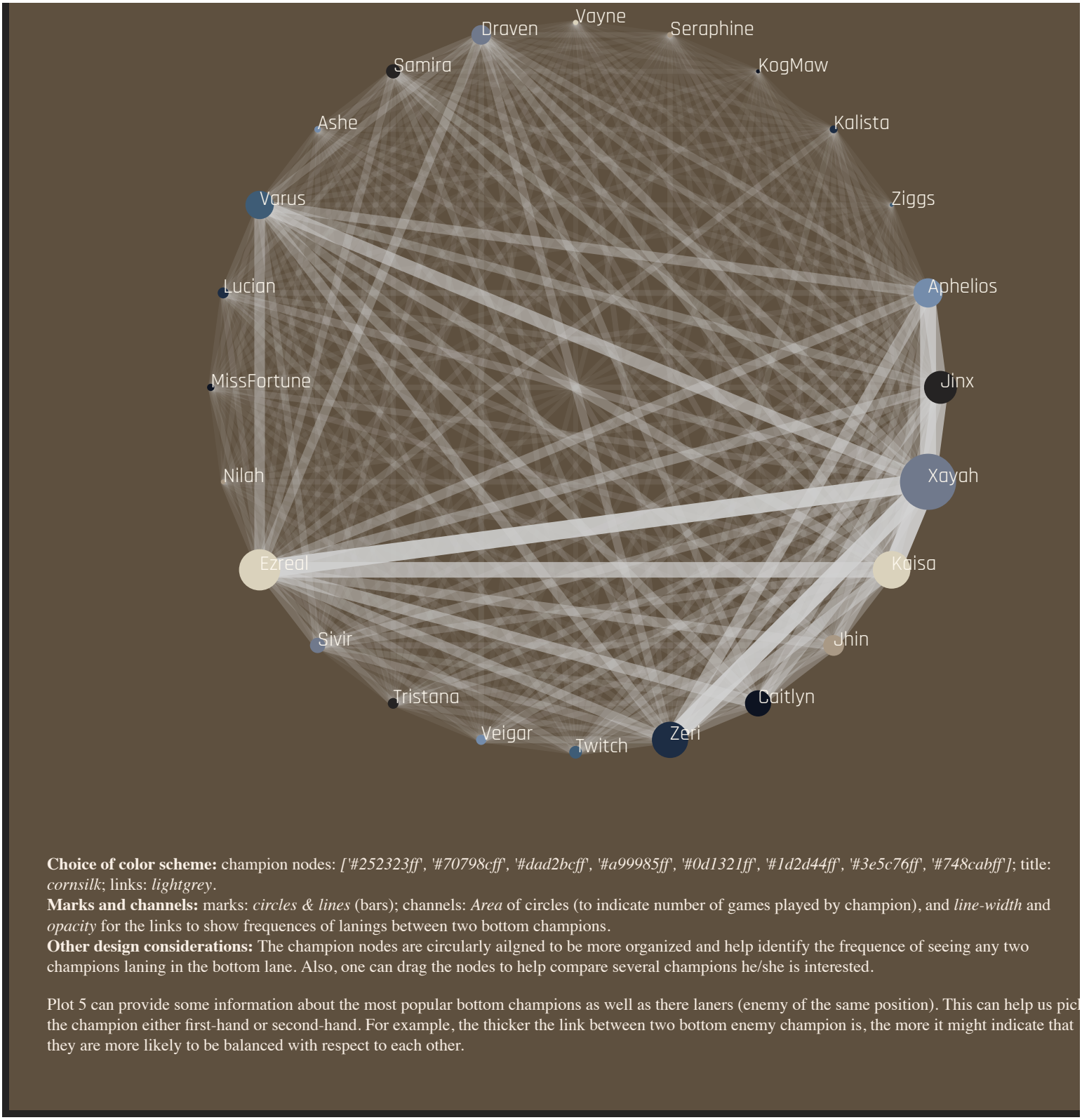
4.

Choice of color scheme: platforms(servers): *['#797d62ff', '#9b9b7aff', '#baa587ff', '#d9ae94ff', '#f1dca7ff', '#ffcb69ff', '#e8ac65ff', '#d08c60ff', '#b58463ff', '#997b66ff']*; title: *black*; axes: *cornsilk*; bubbles: *cornsilk* and *ivory*.
Marks and channels: marks: *circles* (bars); channels: *Area* of circles (magnitude).
Other design considerations: Games' data on some servers are not available or missing (mostly Asian area), and they are colored as grey. Also, a tooltip added so that if the viewer hovers the mouse on a circle, the tooltip will display the server's name and the exactly number of games on that server in this week. Besides, one can zoom the map to see more details about the games in that region (need more work to elaborate).

Plot 4 gives us a geometrical sense of how global players contribute to the LOL community, and tells us in which regions LOL as a MOBA game is more popular (though data from China is not open-source). For example, Korea does not have a large population, but a large portion of games are on the server there. This plot may help us compare some game strategies on different servers.

5.

Laning between Bottom Champions



Choice of color scheme: champion nodes: *['#252323ff', '#70798cff', '#dad2bcff', '#a99985ff', '#0d1321ff', '#1d2d44ff', '#3e5c76ff', '#748cabff']*; title: *cornsilk*; links: *lightgrey*.
Marks and channels: marks: *circles & lines* (bars); channels: *Area* of circles (to indicate number of games played by champion), and *line-width* and *opacity* for the links to show frequences of lanings between two bottom champions.
Other design considerations: The champion nodes are circularly ailgned to be more organized and help identify the frequence of seeing any two champions laning in the bottom lane. Also, one can drag the nodes to help compare several champions he/she is interested.

Plot 5 can provide some information about the most popular bottom champions as well as there laners (enemy of the same position). This can help us pic the champion either first-hand or second-hand. For example, the thicker the link between two bottom enemy champion is, the more it might indicate that they are more likely to be balanced with respect to each other.