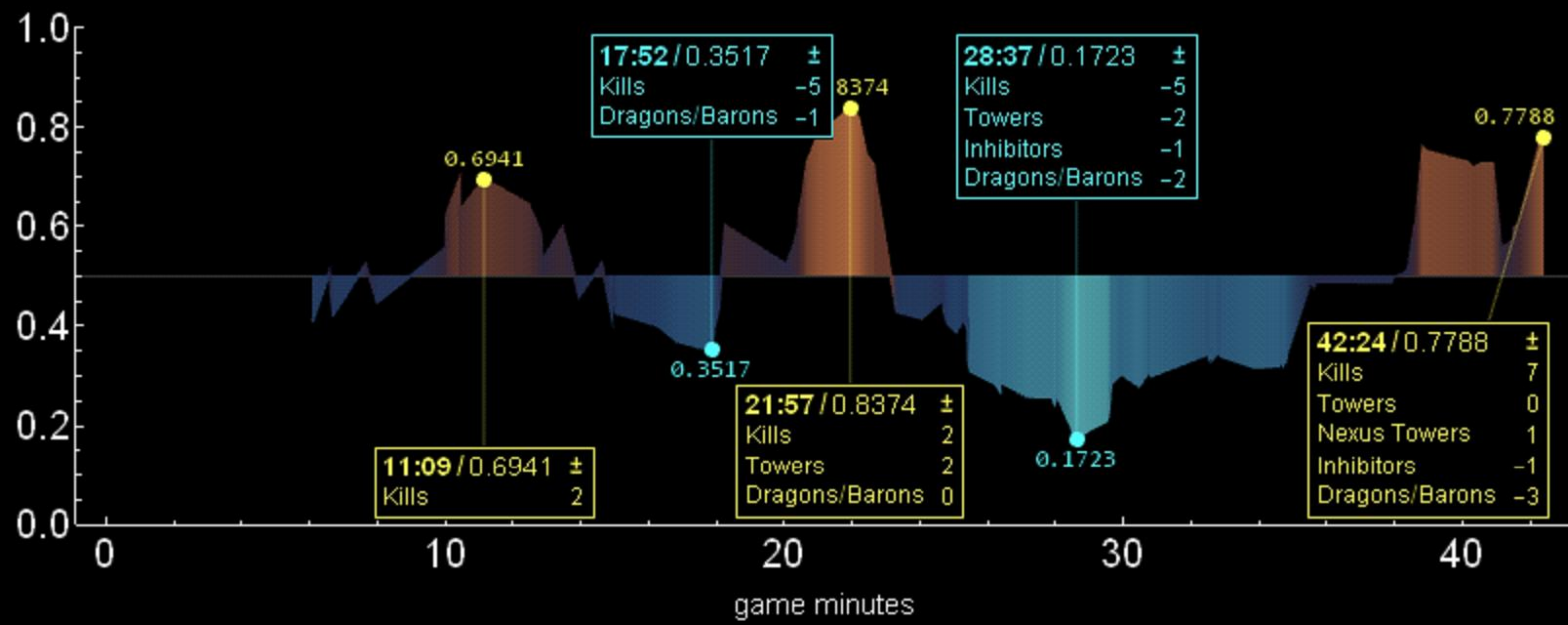


# From Noob to Smurf: Advanced Analytics for League of Legends

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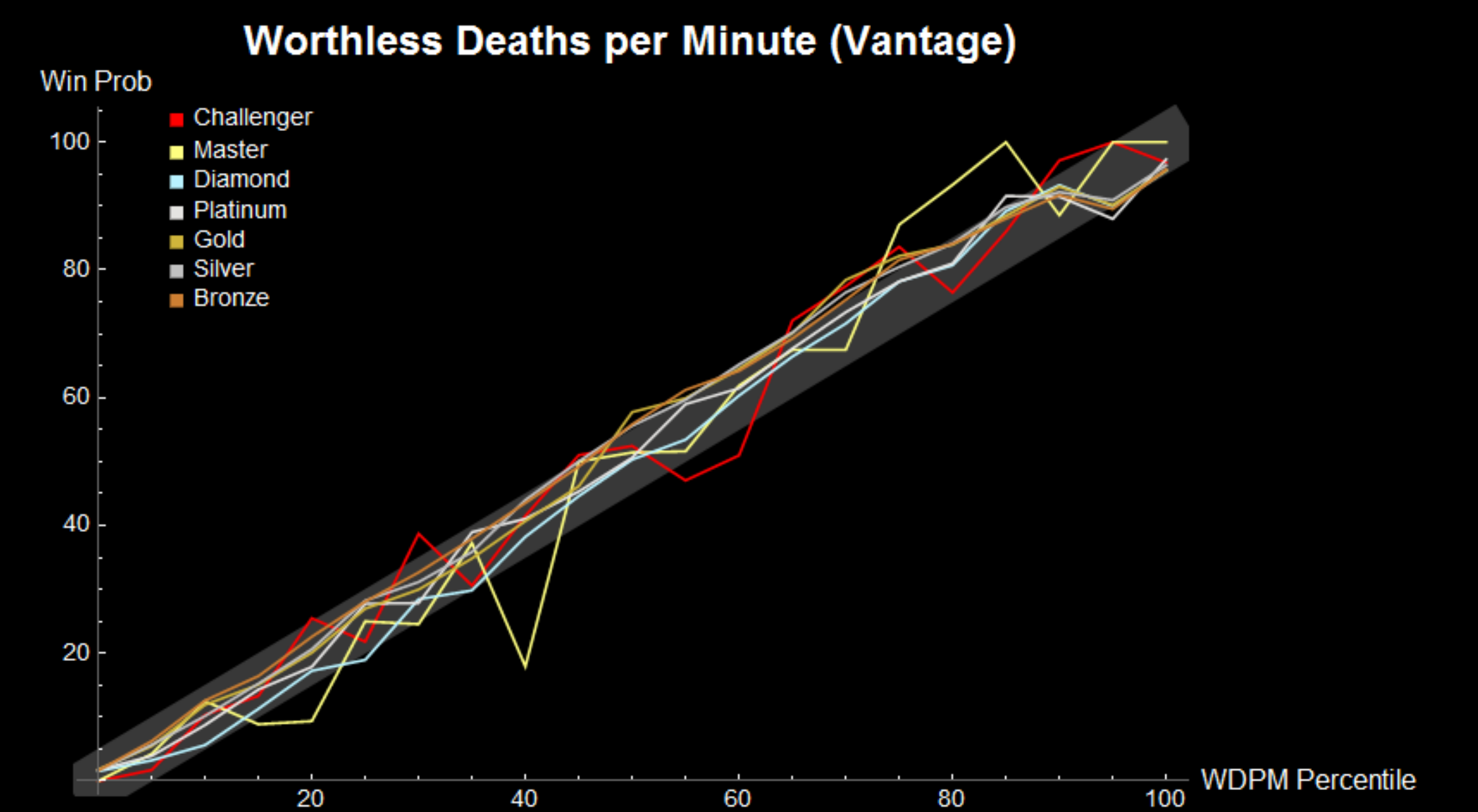
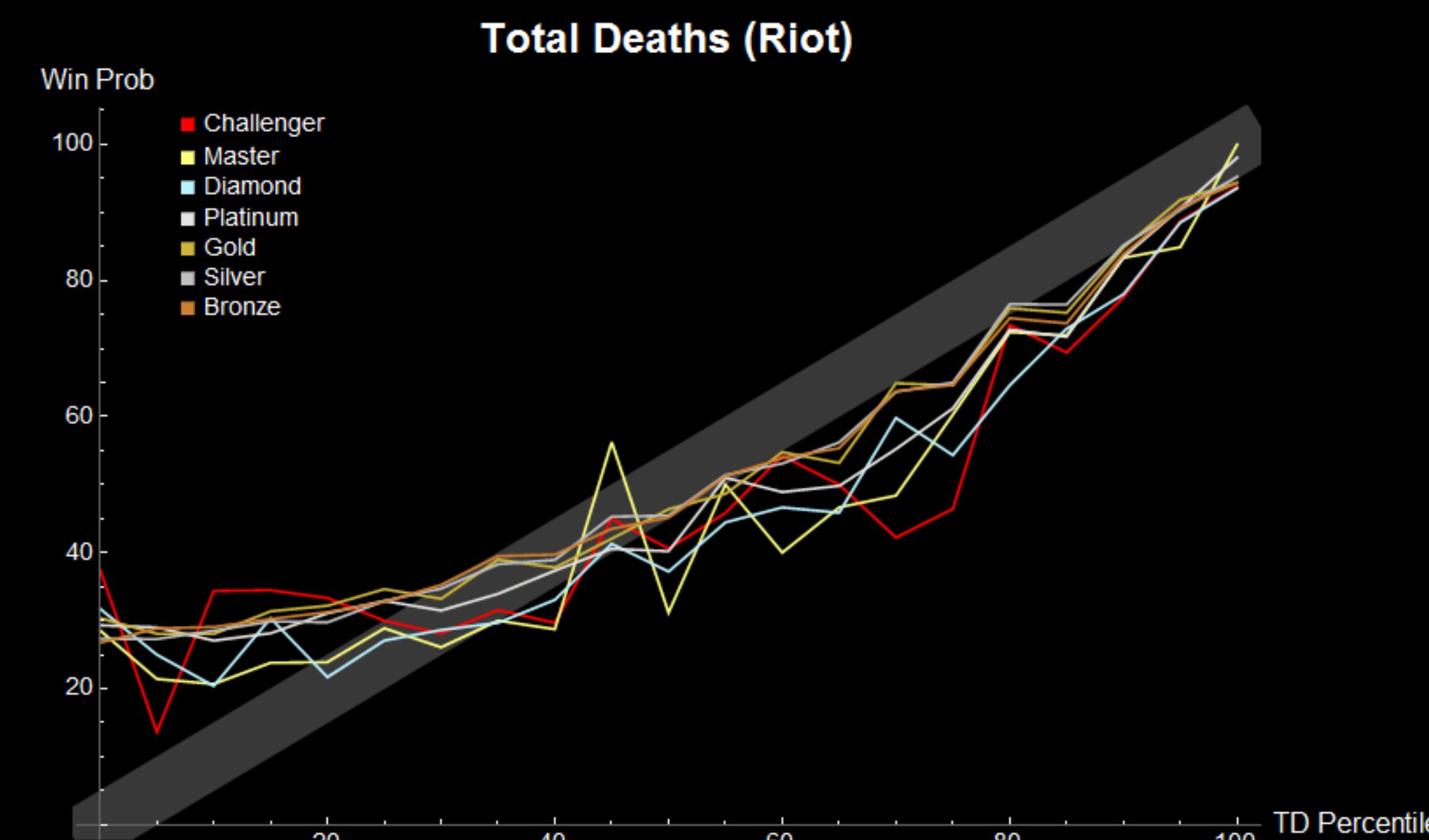
## Post-Game Win Probability with Automatic Annotations



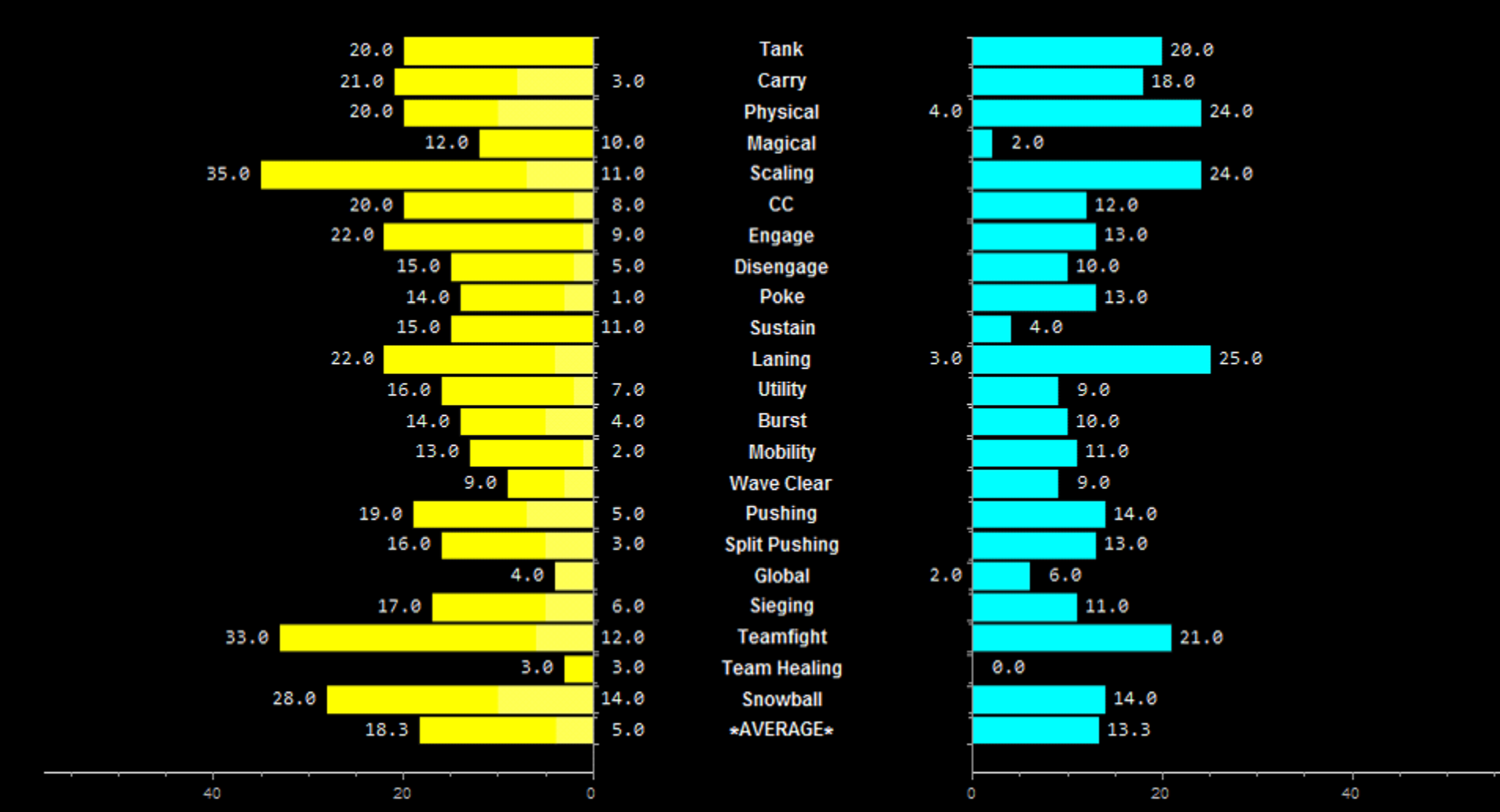
## How Well Does Single Player Performance Predict Overall Winning Probability?

The standard Riot API stats of deaths and kills are, well, okay. The better you do there individually, the more likely your team is to win. But, if you are really good, your team doesn't win as much as it should; and if you are really bad, it doesn't lose as much as it should.

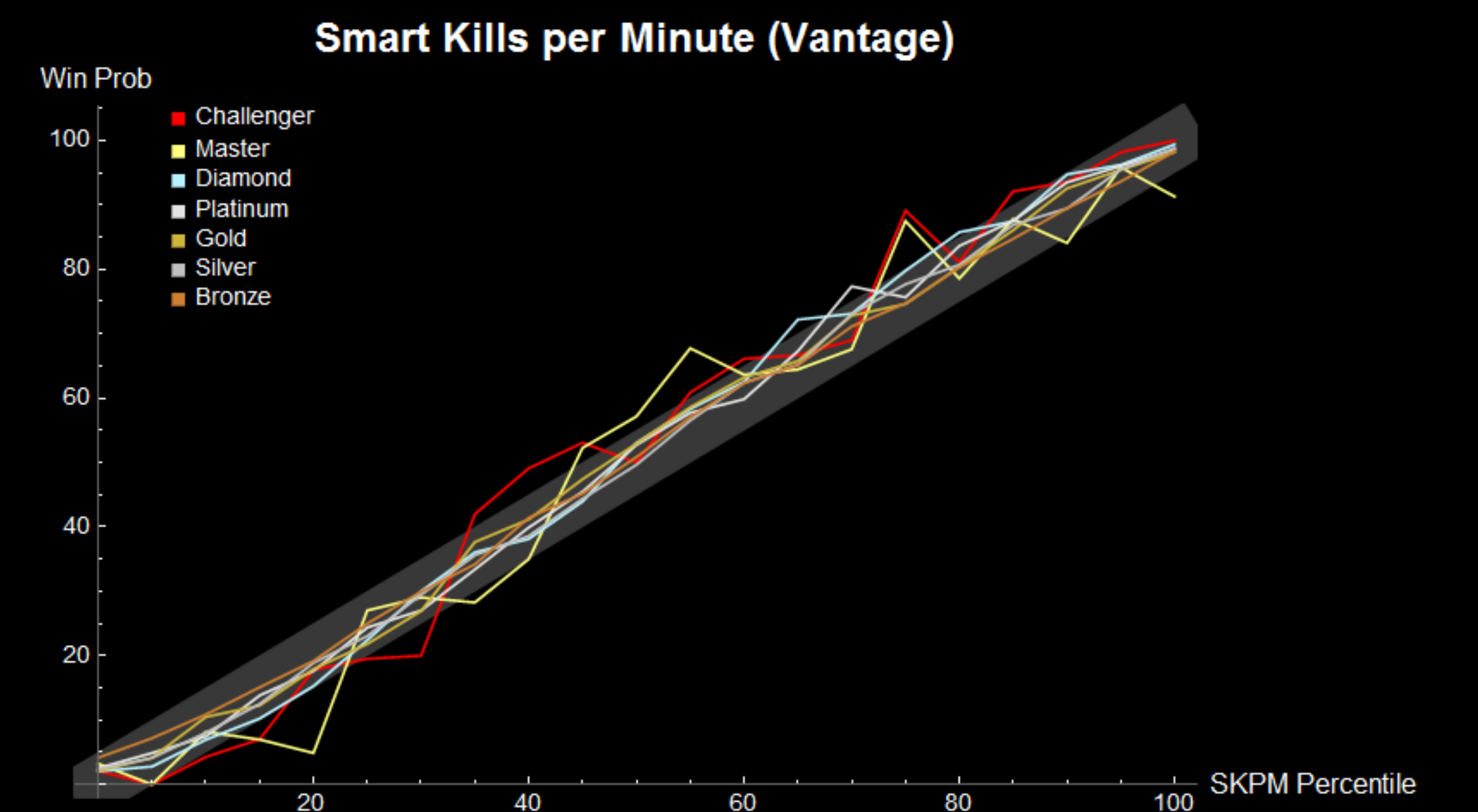
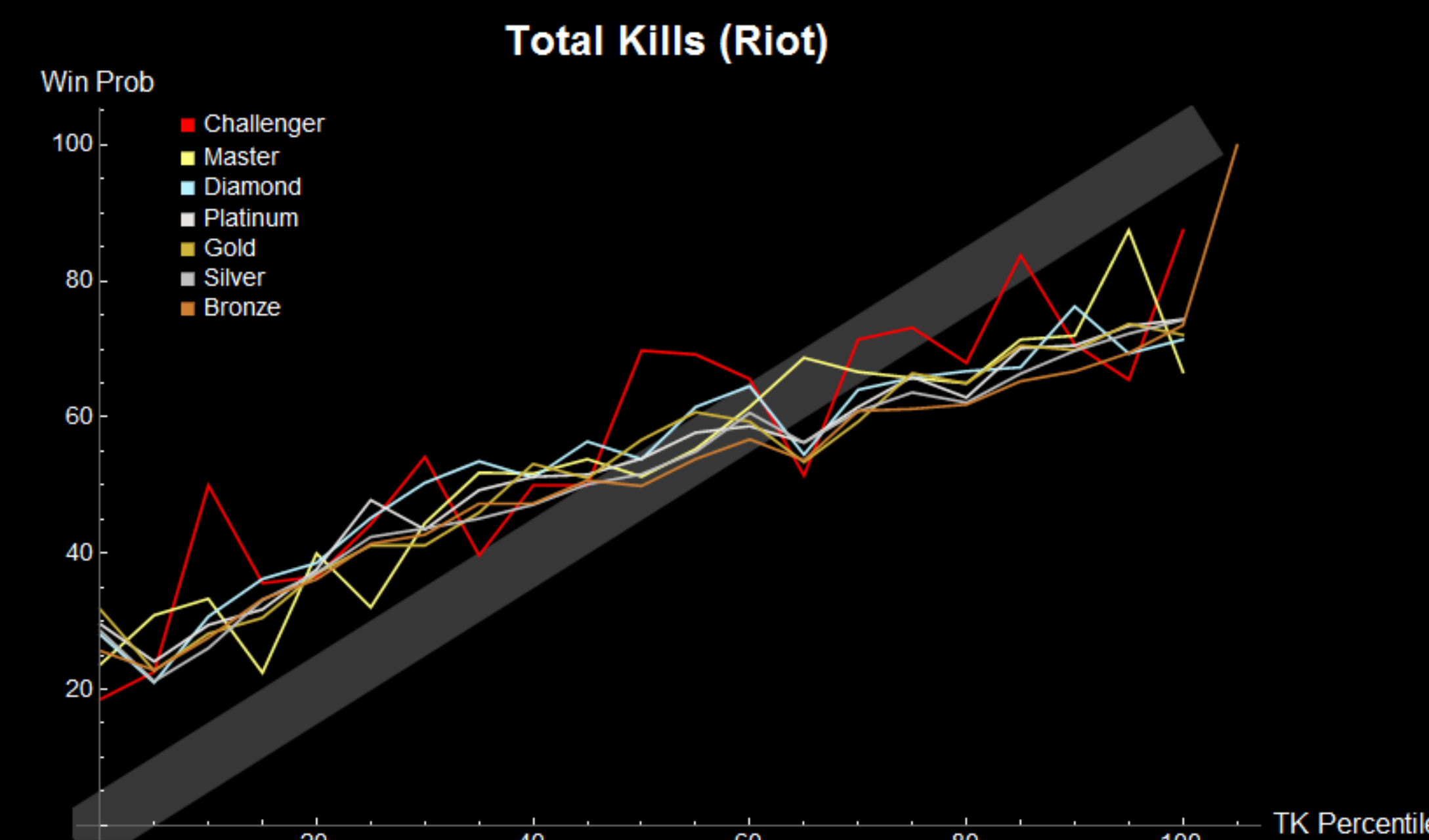
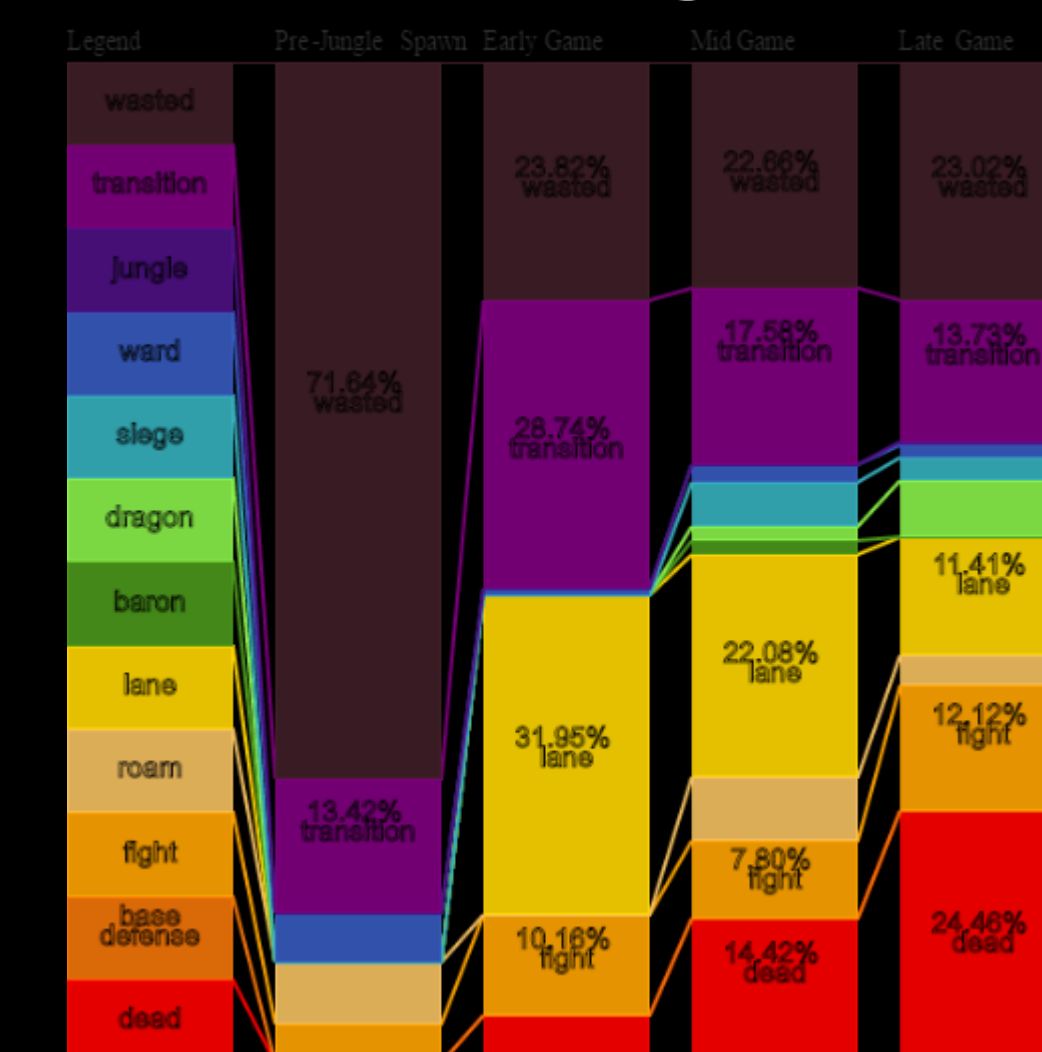
The Vantage metrics are a different story. They are great! They have the right trend, AND they are a much, much better fit. They track the win probability virtually perfectly. The Vantage metrics are much better for predictive purposes.



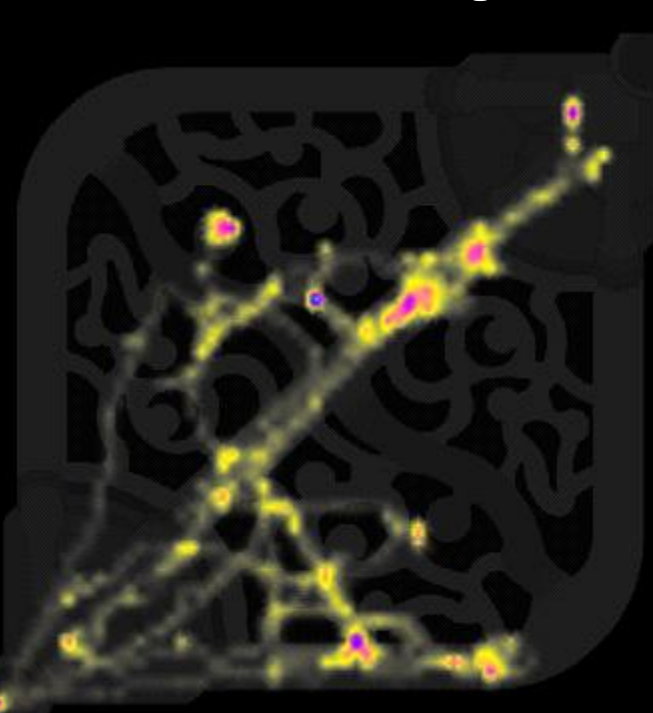
## Team Composition Analysis



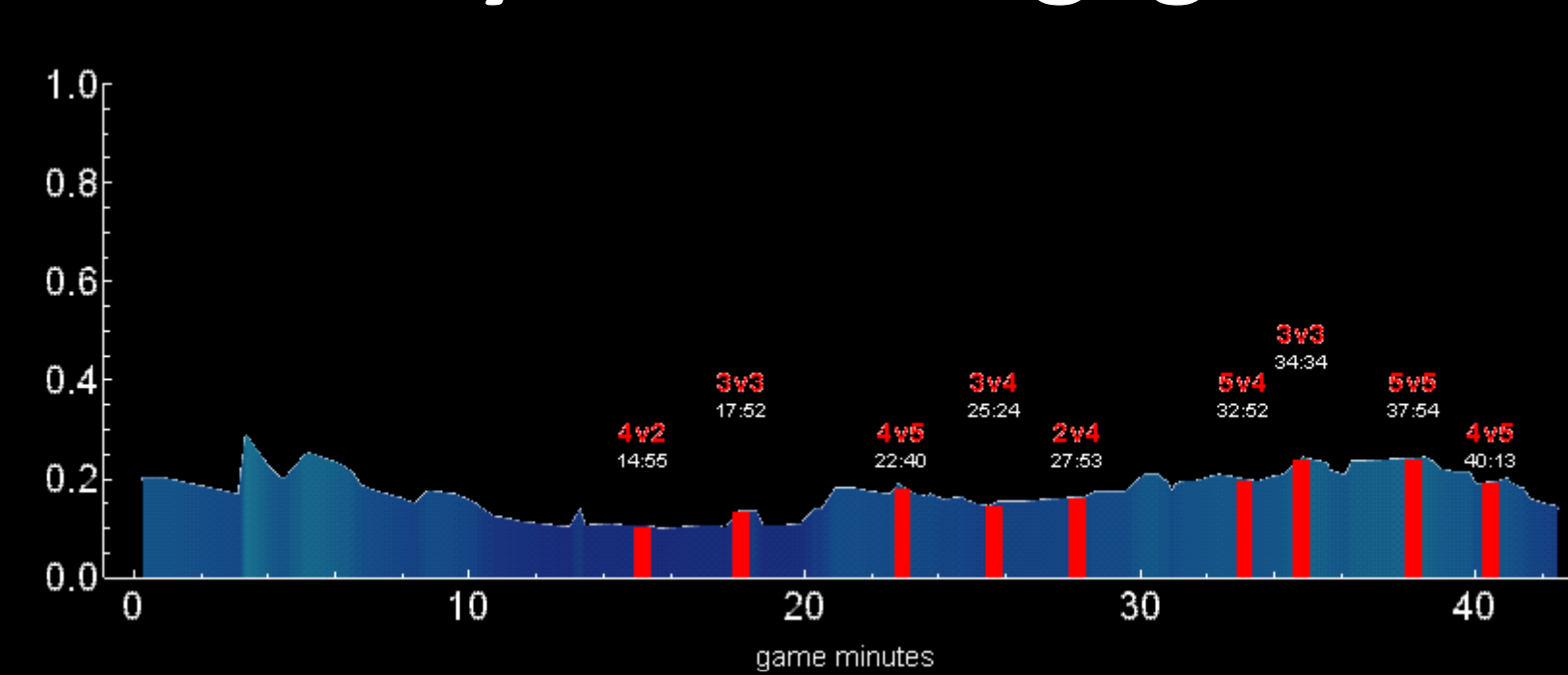
## Time Management



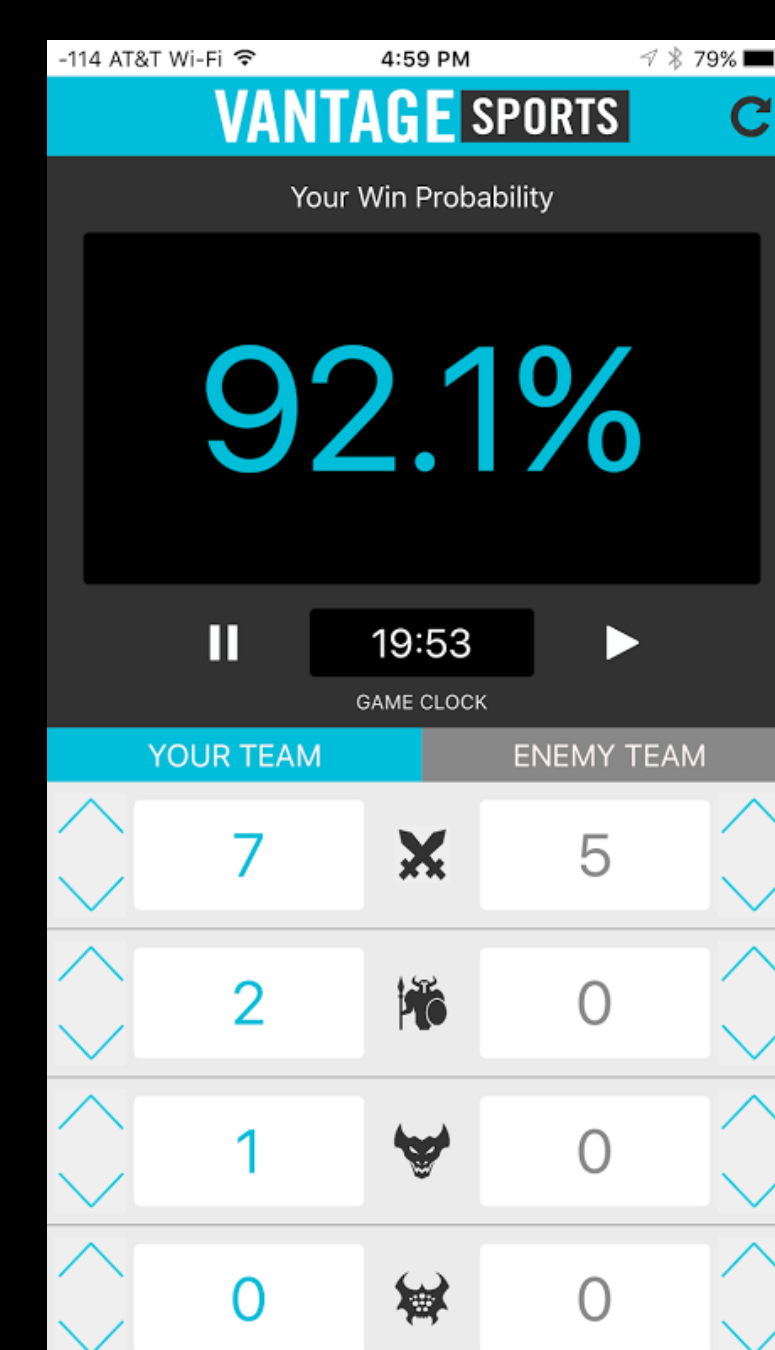
## Heatmaps



## Tilt Analysis and Engagements



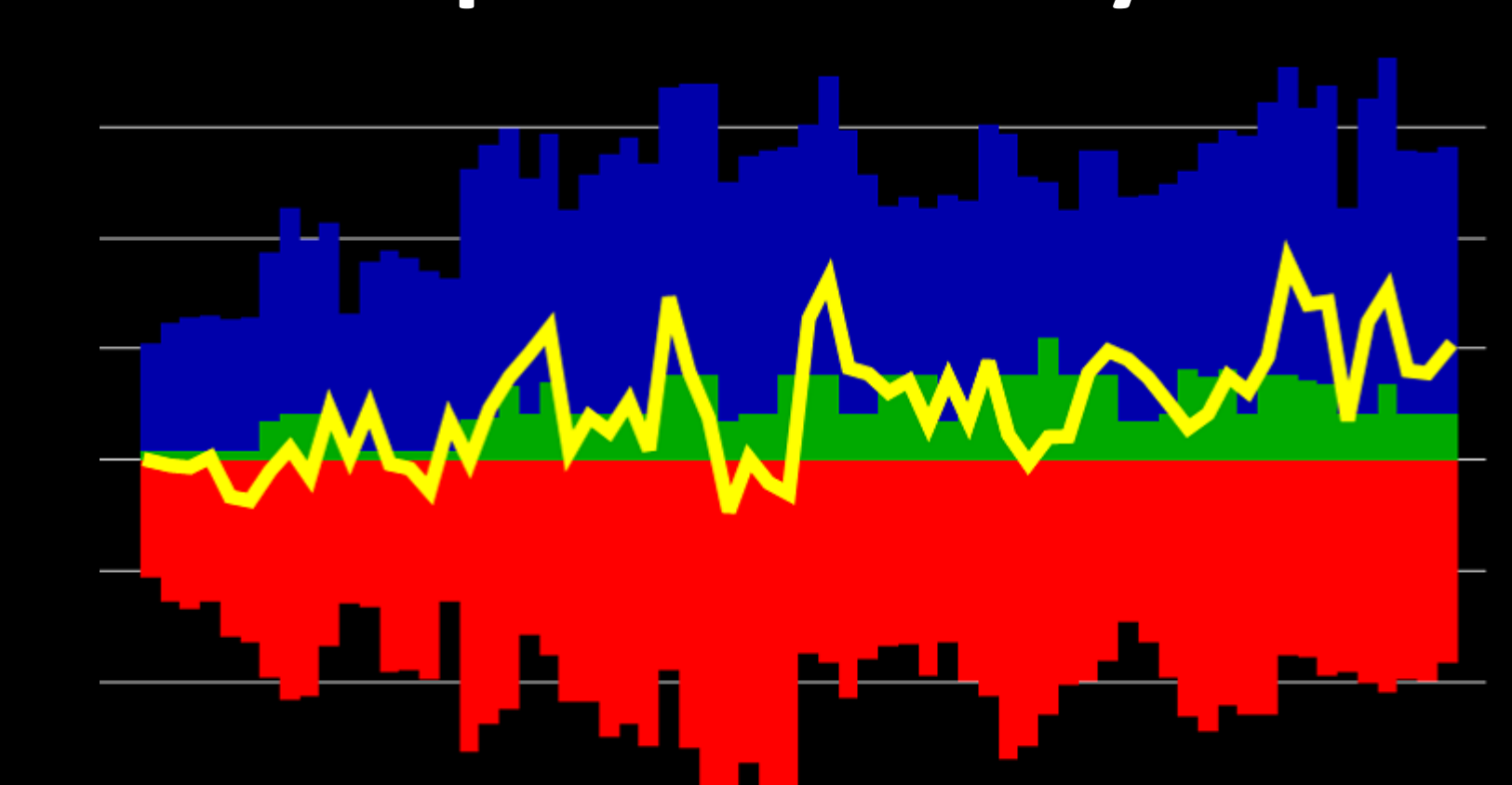
## Live In-Game Win Probability



## Wardmaps



## Map Vision Analysis



**Abstract:** Standard metrics for multiplayer online battle arena (MOBA) games like League of Legends (LoL) are very simple: kills, deaths, and the like. At Vantage Sports, we use a proprietary method to generate unique metrics that are more useful for professional players. These metrics are then calculated for hundreds of thousands of amateur player games, and the results used to determine which ones most contribute to winning. Some of the most important ones are worthless deaths and smart kills, which refine the standard metrics based on whether the team overall benefited from the activity. A new player rating model described here correlates strongly with winning even though it is essentially based on just one individual's contribution to a five-on-five game.