

Team: LOL



How to win the **LEAGUE OF LEGENDS?**



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Research question:

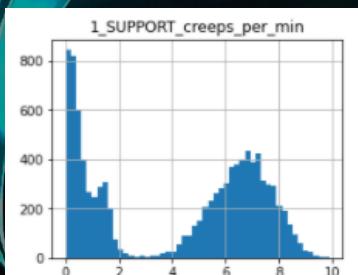
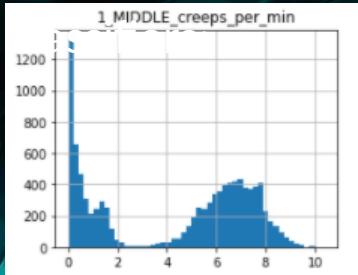
Based on the statistics from the first 10 minutes of the game can we predict its outcome?

- Is predicting lower rank games easier/harder or maybe just different than predicting high ELO matches?
- Which features are important?
- Can we beat the best kaggle notebook result?
- Is the data gathered by ourselves more useful than kaggle's?

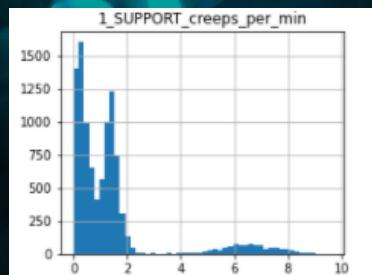
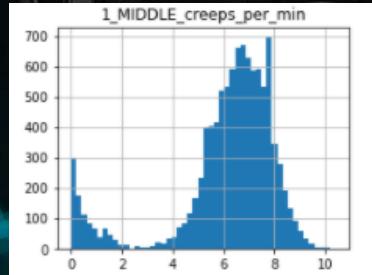
Data, tools and techniques

- First, we needed a clever way to repair the data gathered via Riot API (shout-out to [meraki-analytics](#))
- We rescaled the data and used one-hot encoding for categorical ones
- For the classification we used variety of well-known methods including model-stacking

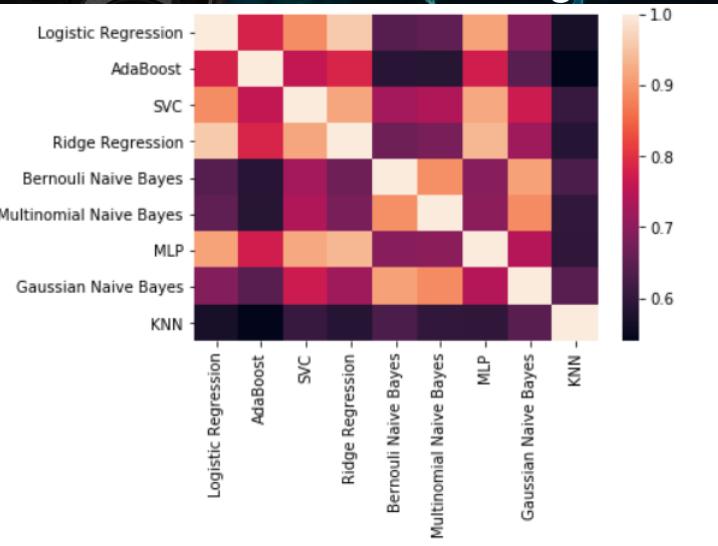
Raw data from Riot API:



Data after lane reshuffling:



Correlation among



Results

- Applying more and more sophistication to our methods didn't result in a significant improvement – starting from approx 68% we ended up with 72% acc.
- As expected, kaggle's dataset was more predictive and resulted in 73% using basic methods which was somewhat close to the best notebook posted there
- Using the data, we could verify hypotheses we put which was as important for us as the predictions
- Since LoL is an e-sport game it isn't surprising that you can't fully predict the outcome based on a quarter of a match
- YES! We are happy :D

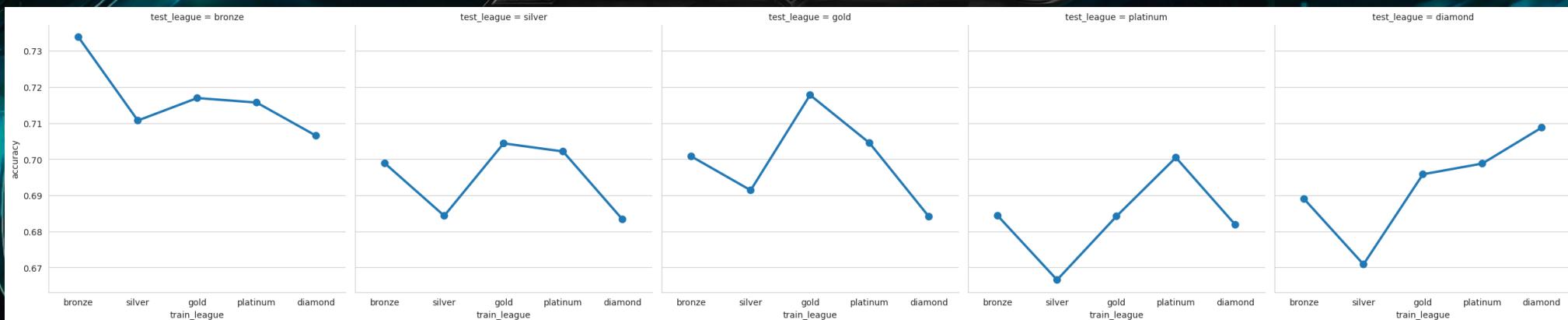
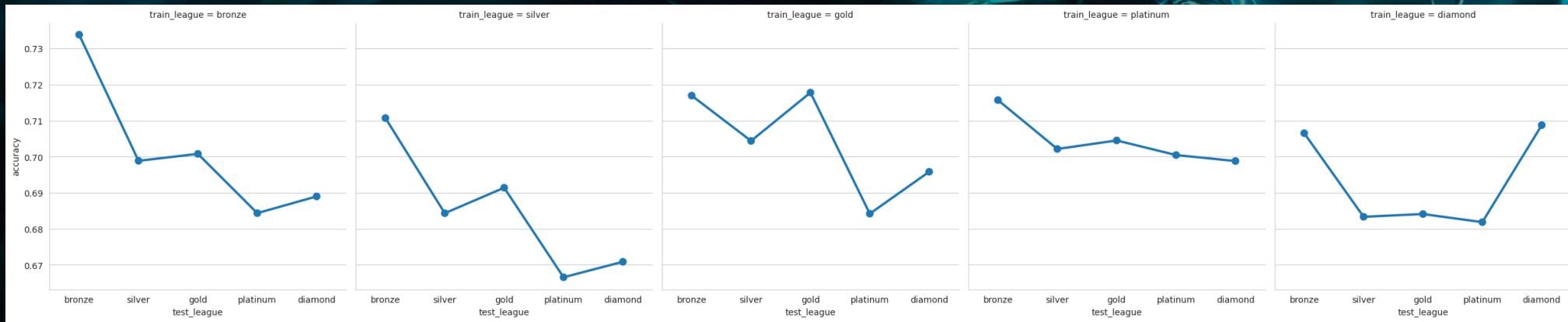
Conclusions

- It is crucial to look at the data and check its credibility
- Understanding the model is very important
- Try different techniques and approaches – there's no universal best
- If we had KDA the accuracy could be better
- We could probably work out our own champion meta if we had more data
- Adjusting hyper parameters using model stacking requires enormous computation but at the end of the day (and night xd) it pays off

Links

- The report is at [early-results-and-insights-notebook](#)
- The source code is at [model-stacking-notebook-72acc](#)
- Discussion will happen at [https://meet.google.com/nve-iuac-zja](#)

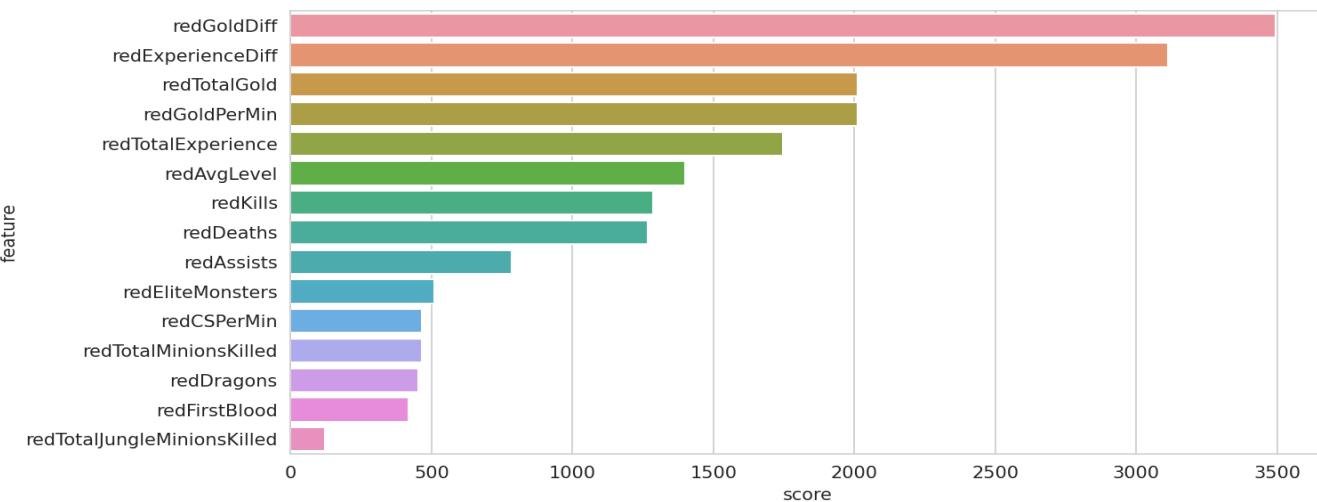
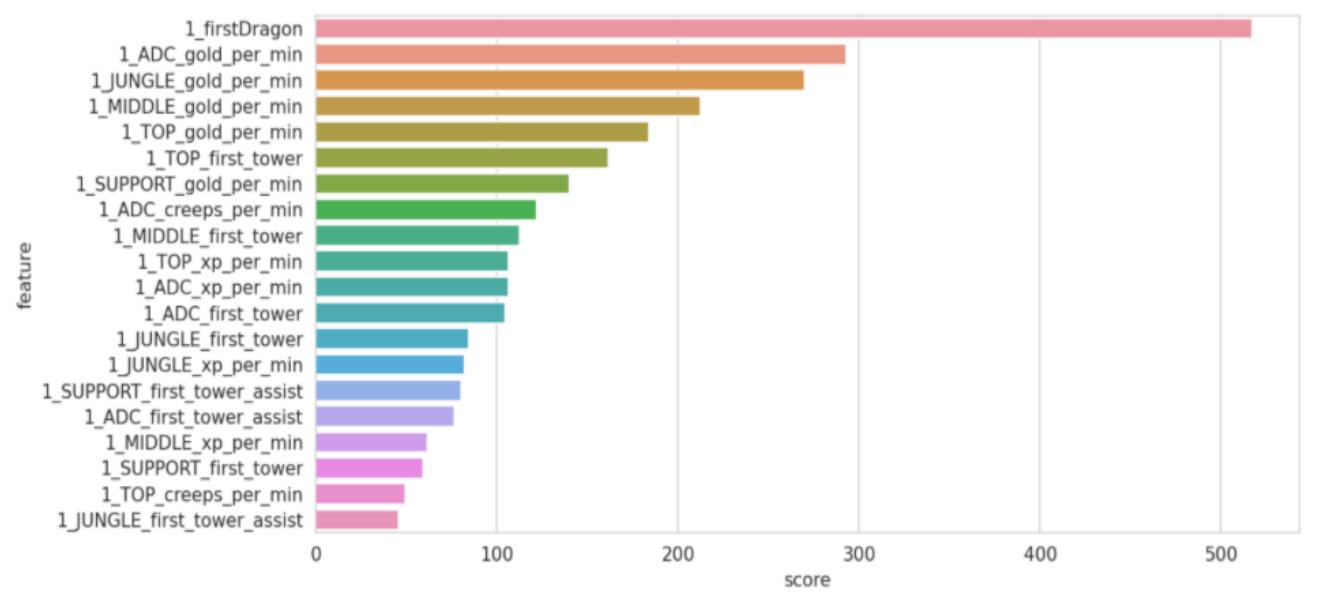
Which league is the most predictive?



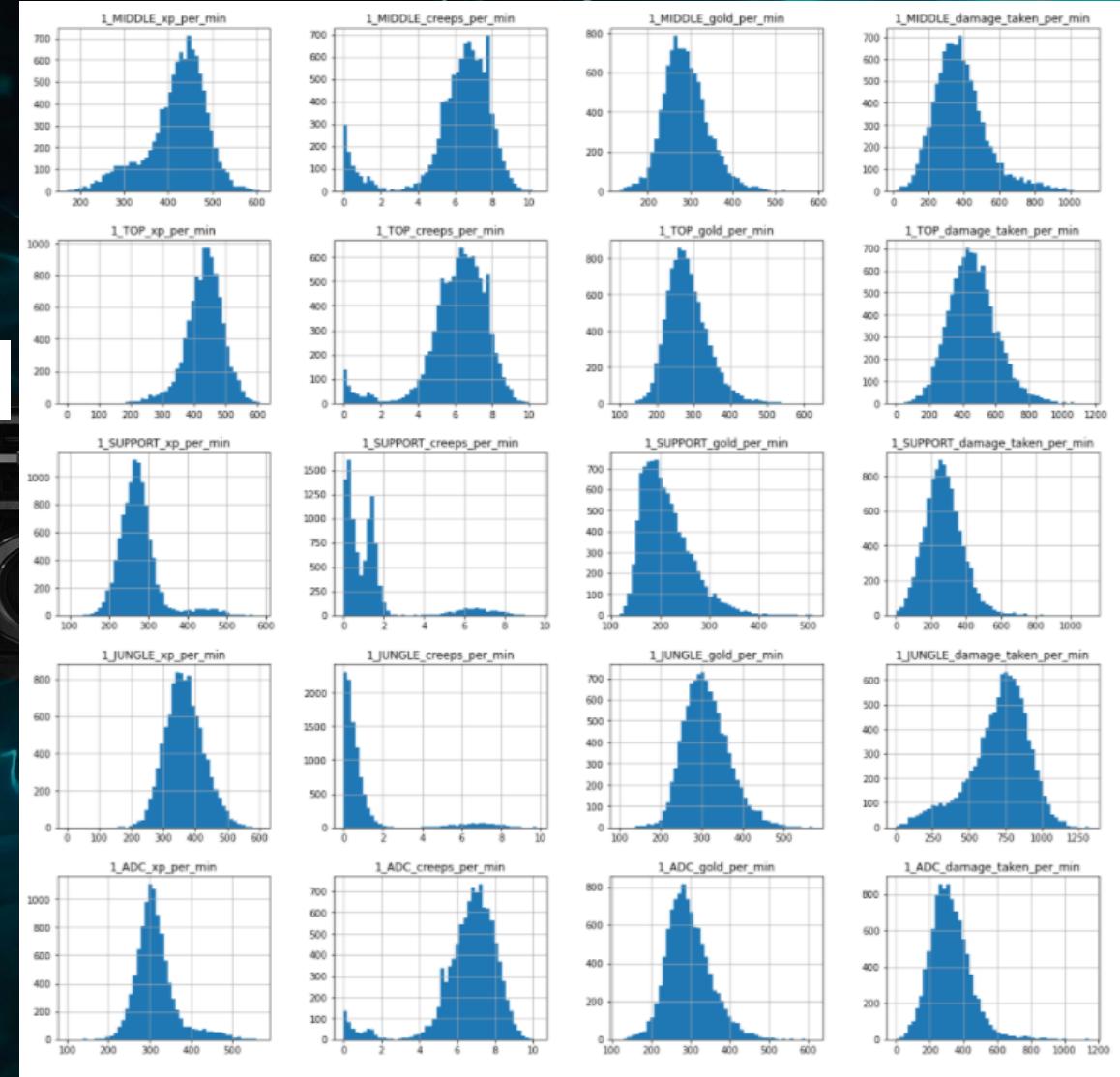
Feature importance - it makes sense!

kaggle data

our data:



How the data resembles real game experience?



Did reshuffling help?

Ayeee!

