

Using Machine Learning to Improve Your League of Legends Results

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The League of Legends logo, featuring the words "LEAGUE of LEGENDS" in a stylized, golden, metallic font with a 3D effect and a slight shadow.

What is League of Legends?

- League is MOBA or Multiplayer Online Battle Arena
- One of the most popular games in the world
- Turned 10 this year
- Requires strategy and coordination of 5v5 teams.

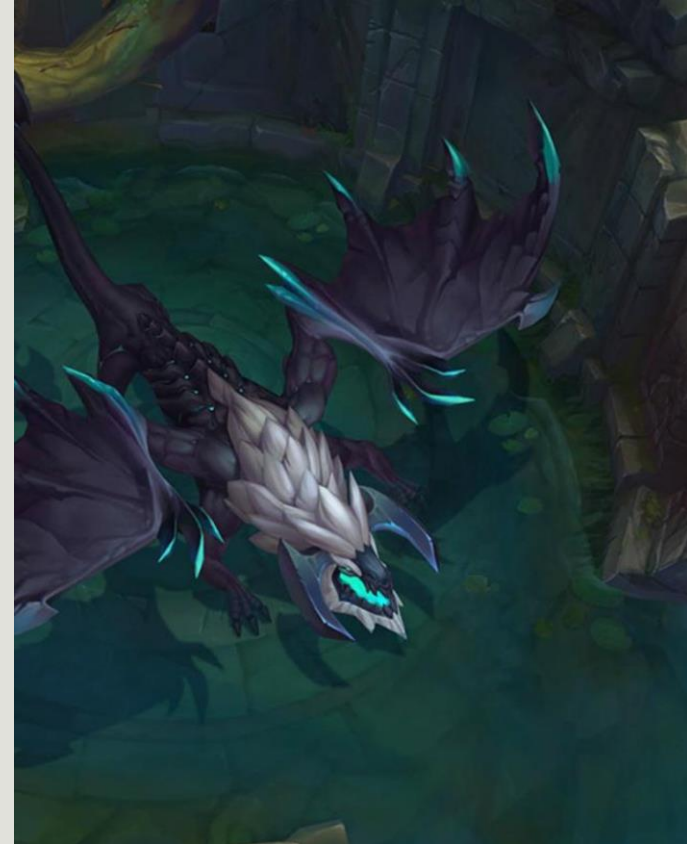
How to Win

- First must destroy towers
- Then inhibitor(s)
- Finally enemy team's Nexus



Side Objectives

- Dragons
- Rift Herald
- Baron



How Can Machine Learning Help?

- Feed in data from previous games
- Output what has the biggest impacts
- Can possibly predict games

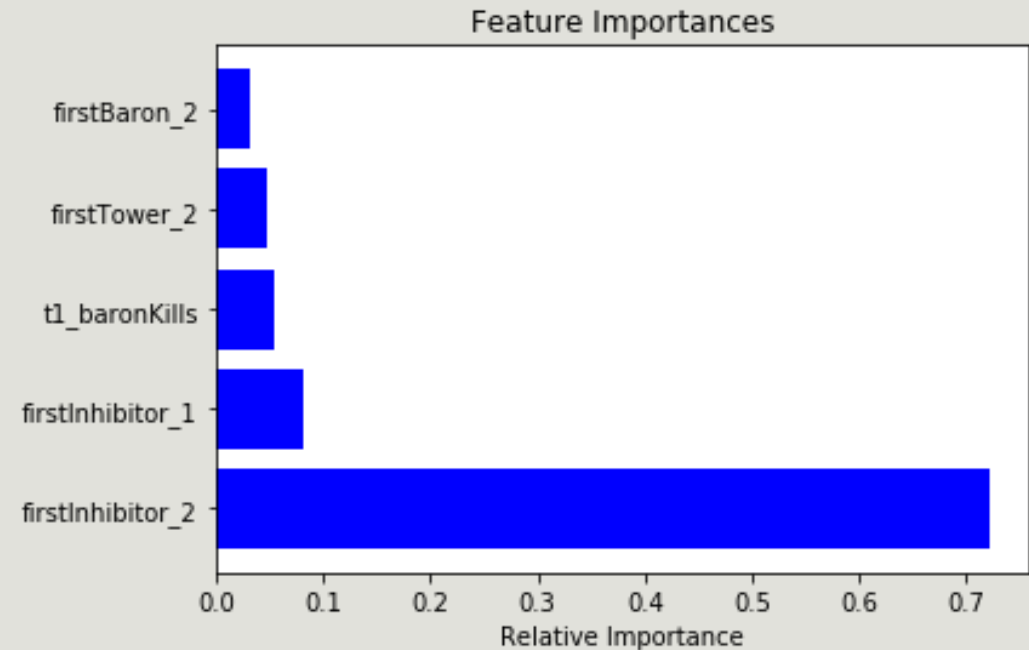
Algorithms Used

- Decision Tree
- Random Forest
- SVM
- AdaBoost



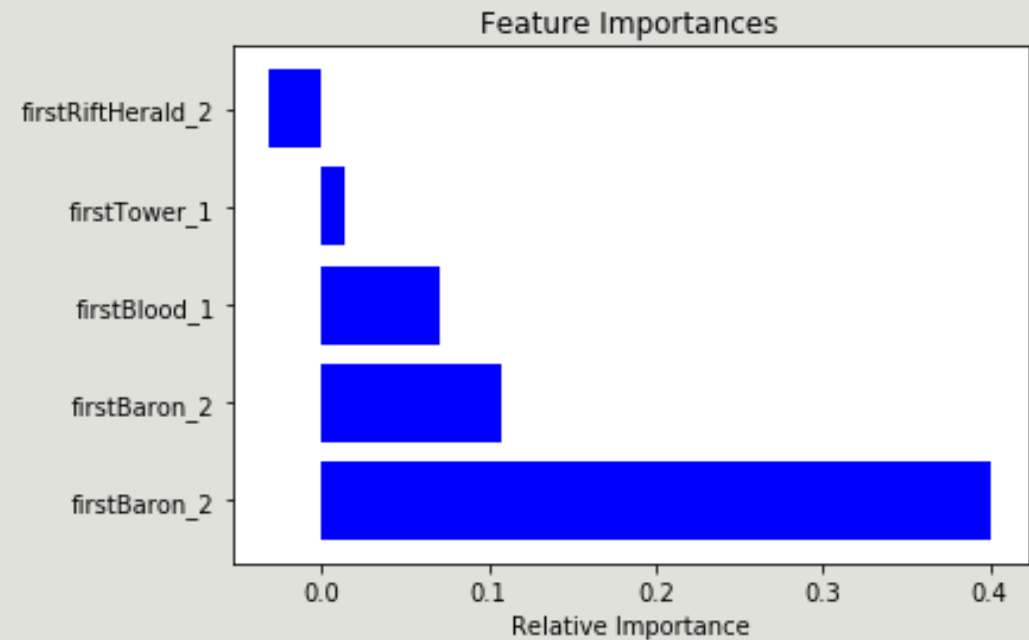
Features that had the Highest Importance

- First Inhibitor
 - 90% win rate
- Baron
 - 80% win rate



Features (continued)

- First Dragon
 - 67-68% win rate
- First Tower
 - 70% win rate



Base your Gameplay Around Objectives

- Don't worry solely about getting the most kills and being a star.
- Just defeating objectives will lead to more success overall.



Conclusions

- Strategies can be developed around predictions
- Skill level matters just as much
- Nothing beats practice
- ML can provide lots of valuable data for eSports

Future Work

- Add more data and features to build a better model
- Compare professional gameplay to different levels of ranked amateur players



Thank You

- I hope you enjoyed my presentation
- Questions?