

# Predicting League of Legends Wins

Alex Stake

# Background

- One of the most watched games
  - **Worlds Viewership: 99.6 Million**
- 115 Million Monthly players in 2020

The question: How to predict the winners and what factors are most important to winning?



# Data

- ~50,000 games
  - First 15 minutes
  - Diamond league games
- Features:
  - Champion kills
  - Towers destroyed
  - Overall gold



# Model Results

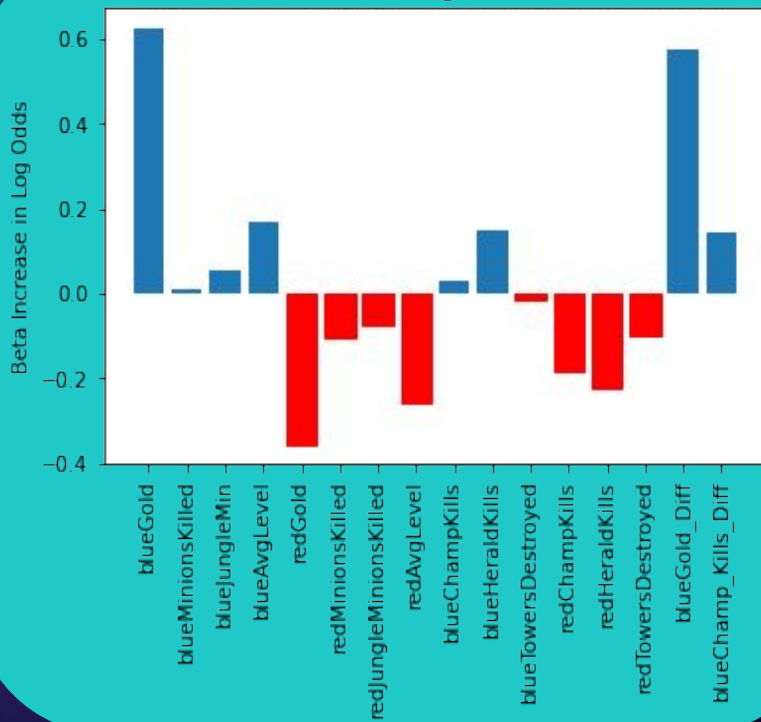
F1 Score: 0.80068

Accuracy: **79.56%**

Logistic Regression Confusion Matrix for All Features



Coefficient Increase in Log Odds for Each Feature



# Feature Importance

Team Gold

0.62525

Gold  
Difference

0.57503

Average  
Player Level

0.16869

Enemy  
Team Gold

-0.35426

Enemy  
Team Avg  
Level

-0.25719

Enemy  
Team Herald  
Kills

-0.22247



# Future Work

- Gather player by player info
- Team Composition
- Gather data from other leagues
- More game objective data
  - Dragon, Baron, etc.



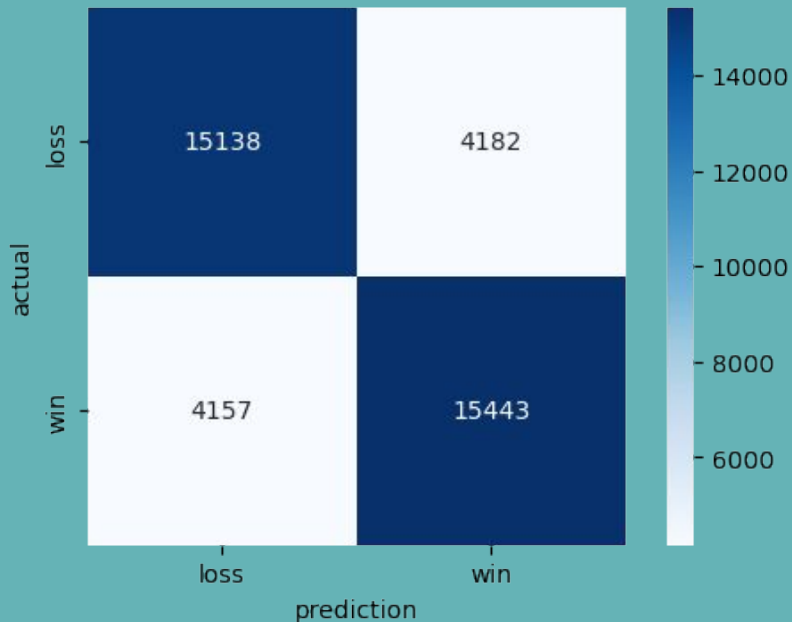
# Questions

**CREDITS:** This presentation template was created by **Slidesgo**, including icons by **Flaticon**, infographics & images by **Freepik** and illustrations by **Stories**



# Appendix

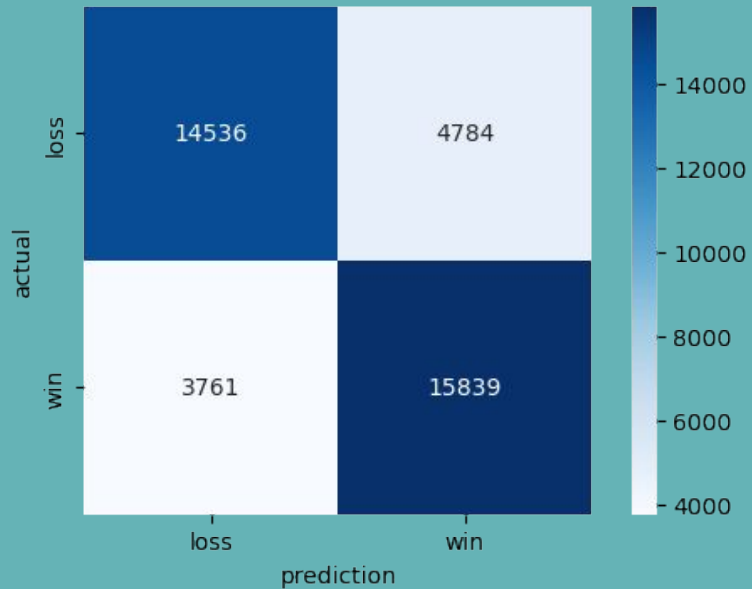
Logistic Regression Confusion Matrix for All Features (Training)



# Training Model

F1 Score: 0.78740

Regression Tree Confusion Matrix for All Features (Training)



# Tree Model

F1 Score: 0.78755