

League of Legends

Win Probability

Dayv Doberne

x x x x x
x x x x x
x x x x x
x x x x x



League of Legends

- Riot Games, 2009
- 5v5 MOBA



x x x x x
x x x x x
x x x x x
x x x x x
x x x x x

League of Legends

- Over 100M unique viewers
- \$310M Broadcast Deal (Huya)



x x x x x
x x x x x
x x x x x
x x x x x
x x x x x



Roles:

- Top
- Jungle
- Mid
- ADC (Ranged)
- Support

x x x x x
x x x x x
x x x x x
x x x x x
x x x x x

Who's Winning?



Kills

Force respawn
timer



Who's Winning?



Kills

Force respawn
timer



Towers

Defend the
Nexus



Who's Winning?



Kills

Force respawn
timer



Towers

Defend the
Nexus



Gold

Buys powerful
items



Who's Winning?

It depends.

x x x x x
x x x x x
x x x x x
x x x x x
x x x x x

Win Probability



https://public.tableau.com/app/profile/dayv.doberne/viz/TS_Mvs_CLG2016NACLS_SpringPlayoffs/Dashboard1?publish=yes

Data and Methods

× × × × ×
× × × × ×
× × × × ×
× × × × ×
× × × × ×



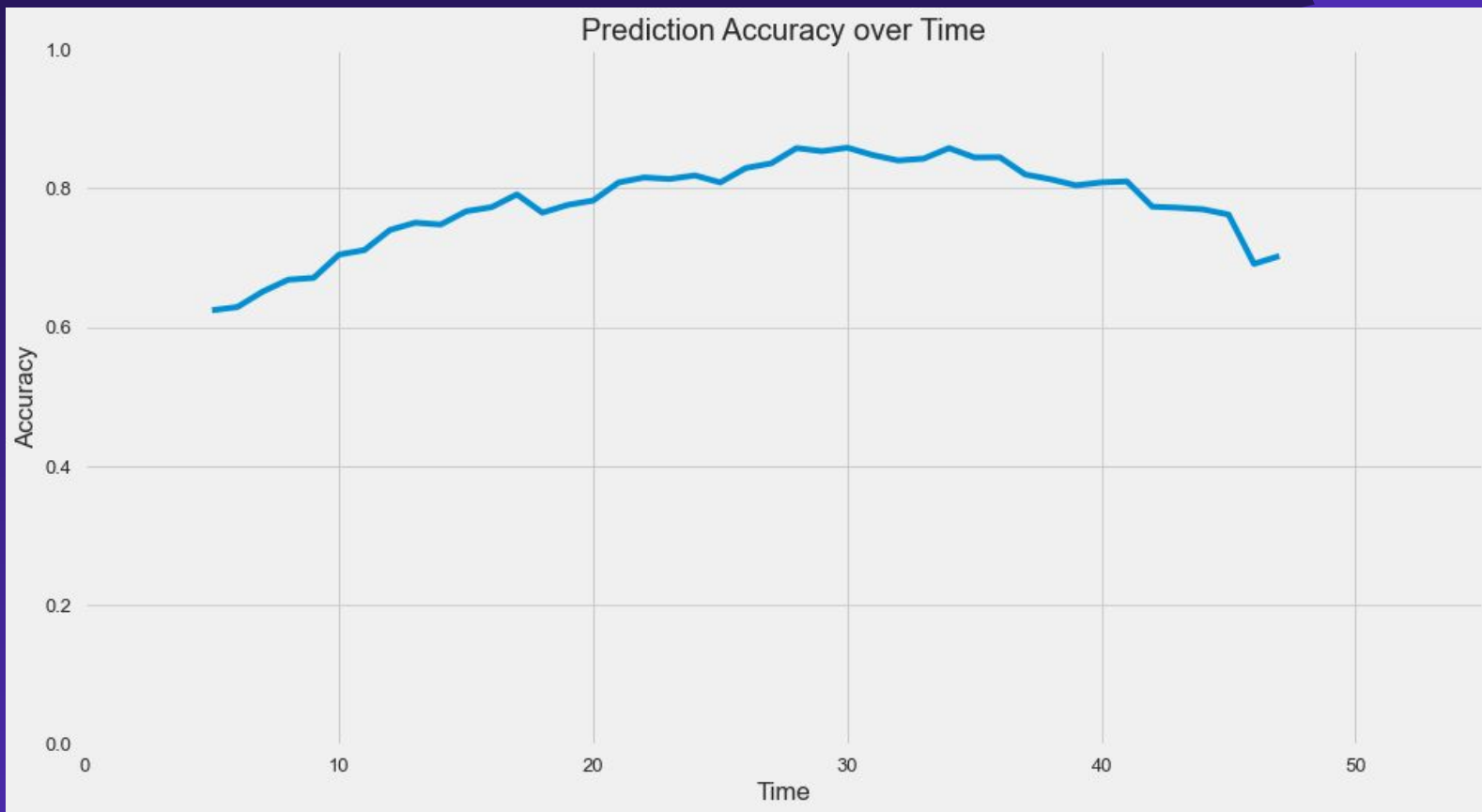
Data and Methods

- 7.6K Professional matches from 2015-2017
- Logistic Regression
- scikit-learn, pandas
- Google Sheets, Tableau, seaborn

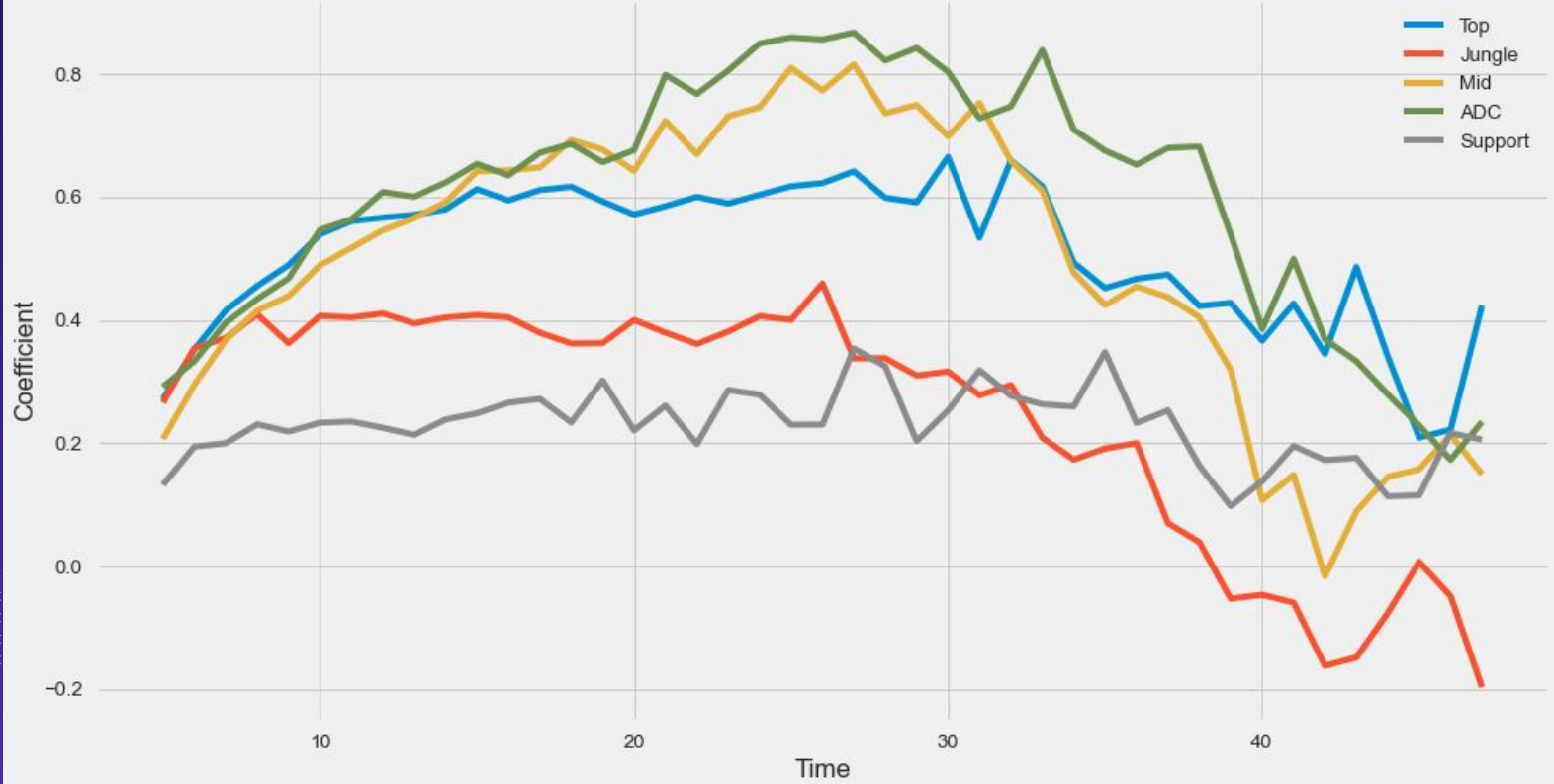
x x x x x
x x x x x
x x x x x
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x x x x x



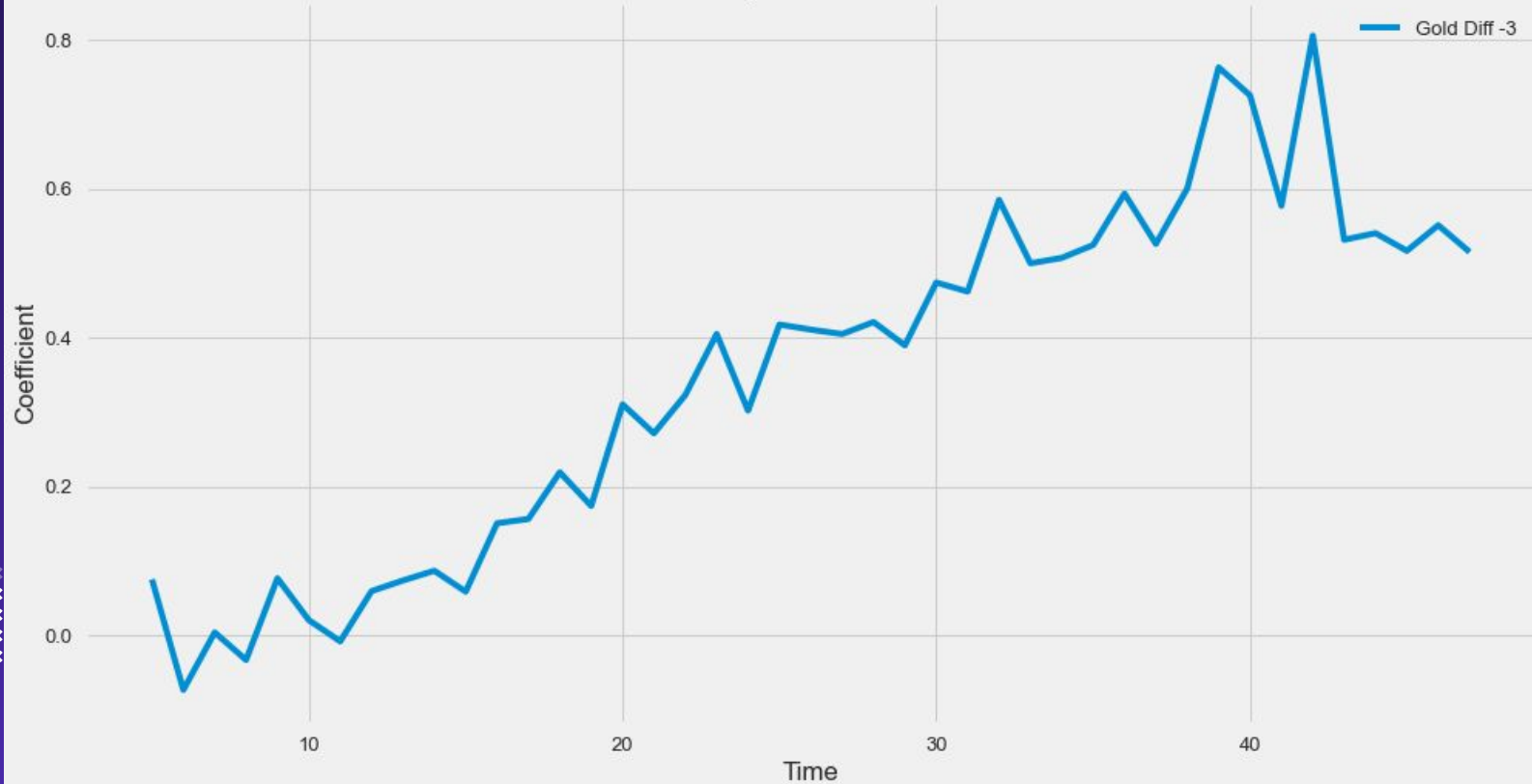
x x x
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x x x
x x x



Gold Differential Coefficient over Time

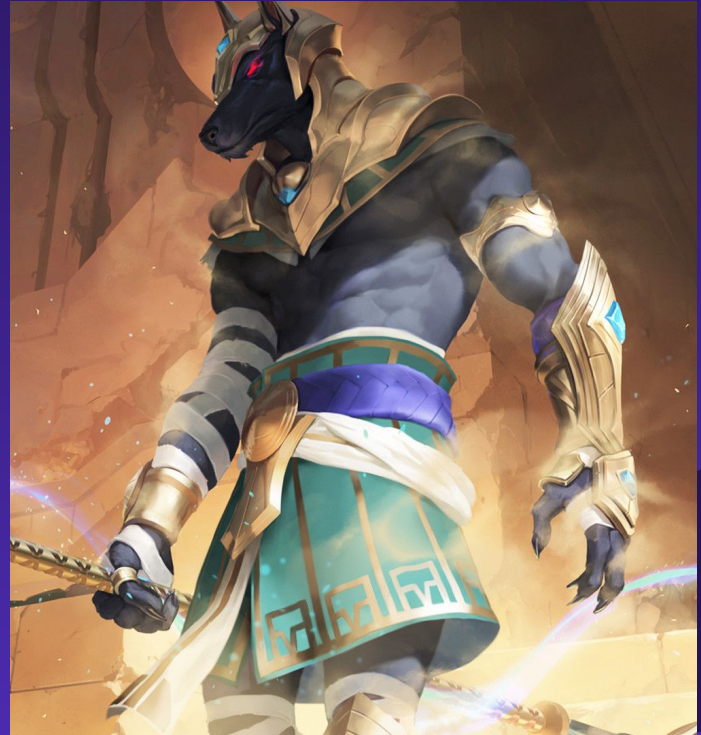


Momentum - More Important as the Game Goes On



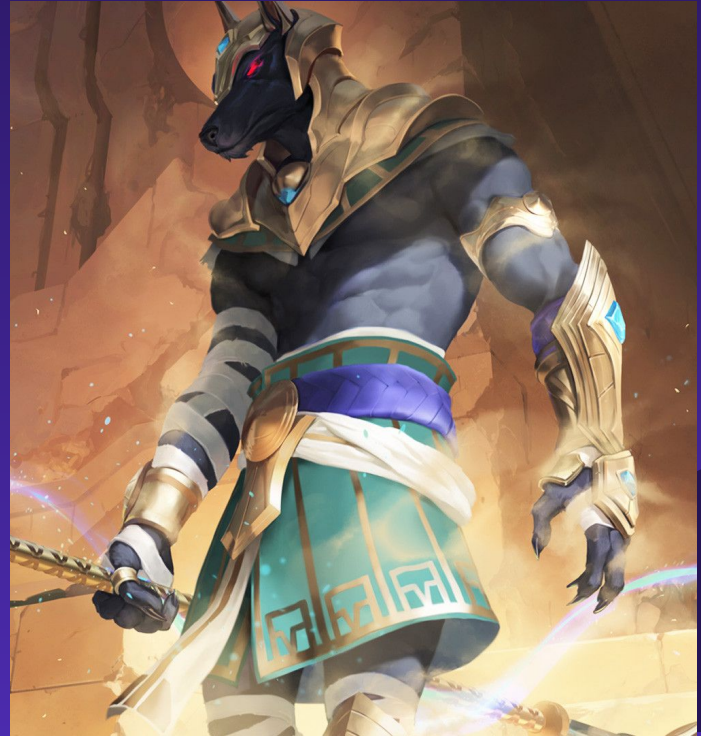
Improving the Model

- More and more recent match data



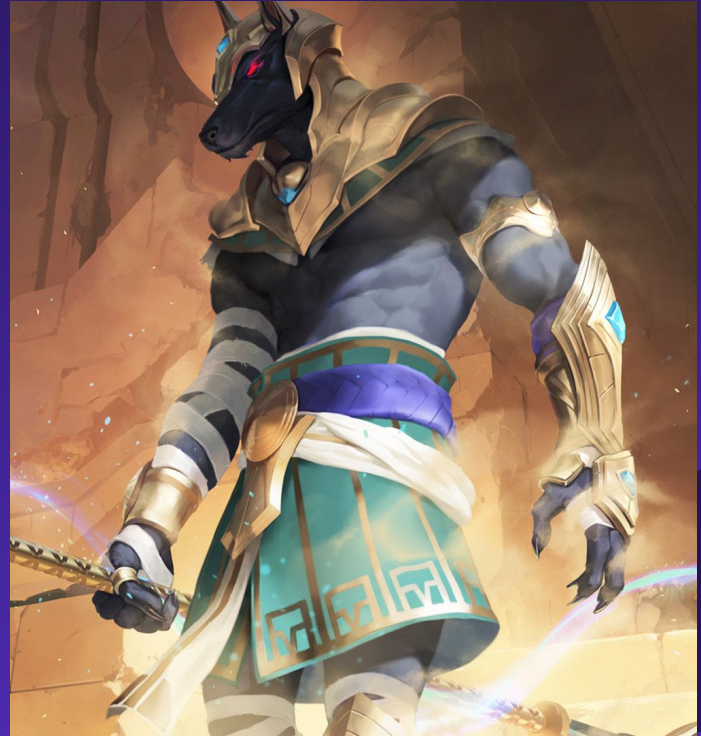
Improving the Model

- More and more recent match data
- Using champions and time as features



Improving the Model

- More and more recent match data
- Using champions and time as features
- League of Legends API



Win Probability



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Thanks!

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



What Matters the Most?

5-9

Top Lane
Gold Differential



What Matters the Most?

5-9

Top Lane
Gold Differential

10-15

ADC Gold Differential

x x x x x
x x x x x
x x x x x
x x x x x
x x x x x

What Matters the Most?



5-9

Top Lane
Gold Differential



10-15

ADC Gold Differential



16-19

Mid Lane
Gold Differential

What Matters the Most?

5-9

Top Lane
Gold Differential



20-38

ADC Gold Differential



10-15

ADC Gold Differential



16-19

Mid Lane
Gold Differential



What Matters the Most?

5-9

Top Lane
Gold Differential



20-38

ADC Gold Differential



10-15

ADC Gold Differential



39+

Momentum
(Recent Gold
Differential)



16-19

Mid Lane
Gold Differential

What Matters the Most?

