

The background is a detailed illustration from the game League of Legends, depicting the ancient ruins of Noxus. In the center, a large, blue, crystalline statue of a Noxian warrior stands prominently. The ruins are made of dark stone and are partially overgrown with green moss and vines. In the distance, more ruins and a large, ornate archway are visible under a hazy, orange-tinted sky, suggesting a sunset or sunrise. The overall atmosphere is mysterious and ancient.

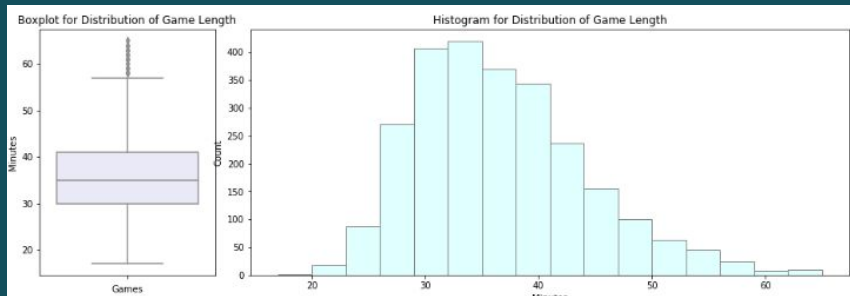
SIMPLE PYTHON ANALYSIS ON

LEAGUE OF  
LEGENDS®

# DATA USED IN THIS ANALYSIS

- Merge the general League of Legends 2017 data set with the Structures data
  - Have to get the minimum time for the first tower taken down
- Focus on 2017 Season games less than 65 minutes
- Variables for analysis:
  - Game length: minutes it took to finish a game
  - Time: when the first tower was taken down
  - Team: whether the blue or red team took down the tower

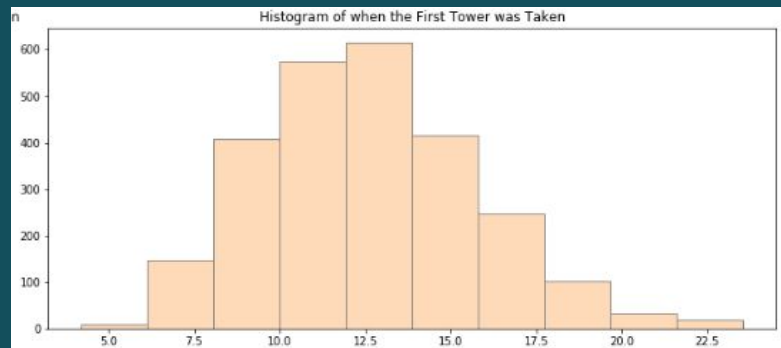
# GAME LENGTH



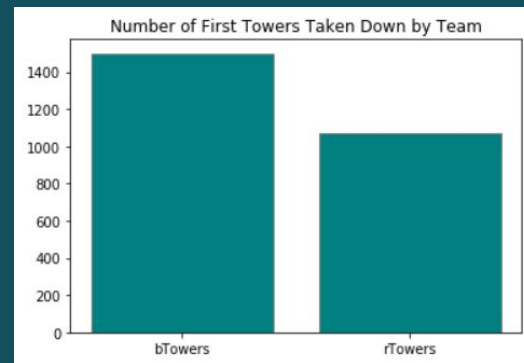
# BLUE vs RED

	bResult	rResult
Year		
2017	1456	1117

# FIRST TOWERS (TIME)



# # OF TOWERS TAKEN BY TEAM



# RESEARCH QUESTION

- Can we accurately predict if the blue team won or lost based on when the first tower was taken down and which one it was?
  - Use Logistic Regression
- Variables:
  - Response: bResult
  - Features: Time and Team

# Model

- Applied the model to the full data set first; had a 68.5% accuracy
- Coefficients

	Intercept	Team[rTowers]	Time
Output (Log-Odds)	0.5140865	-1.15471327	-0.01118849
Odds (Exponentiate)	1.672	0.21987	0.98887

- Confusion Matrix

	0	1
0	<u>263</u>	167
1	145	<u>419</u>

- 64% Lost/Lost
- 72% Won/Won

# Model Evaluation

- Train, Test, Split
  - Test size = 30% of original dataset
  - Accuracy score = 68.6%
- Cross Validation
  - 10 fold
  - Mean accuracy = 68.52%
- Overall, our accuracy is about 68% which is pretty good!