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## TABLE OF CONTENTS







# INTRODUCTION TO DATASETS



OFFENSE AND DEFENSE STATS 2014-2022

GAME RESULTS FOR EACH AND EVERY TEAM 2023

#### **OFFENSE-DEFENSE** 2014-2023 **POINTS**

**SCORED** 

1st DOWNS

**YARDS GAINED** 

**PASSING YARDS** 

**FUMBLES** LOST

**RUSHING YARDS** 

**PENALTIES** 



#### **POINTS ALLOWED**

**1st DOWNS ALLOWED YARDS ALLOWED** PASSING 1st DOWNS ALLOWED

#### **INTERCEPTIONS**

**RUSHING TD ALLOWED** FIRST DOWNS BY

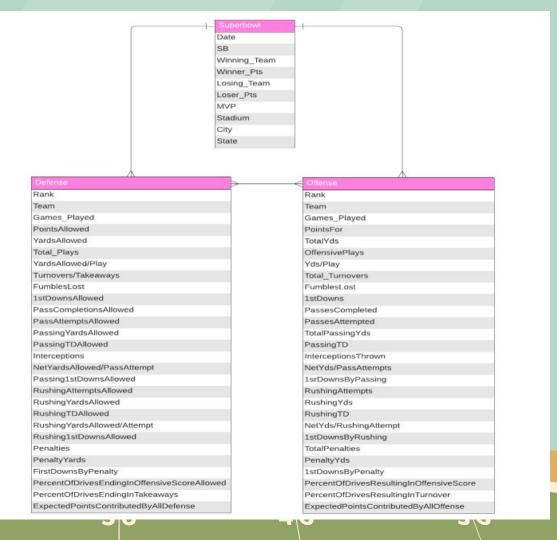






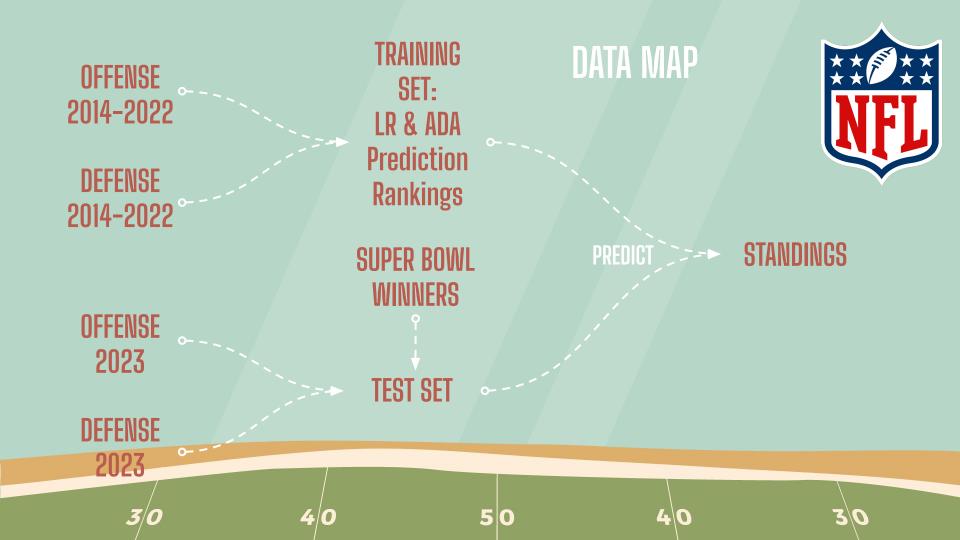


### **Initial Datamap**



3/0

4/0



## GAME RESULTS OF CURRENT SEASON

Team	Week	Result	Record	Opponent	Points Scored	Points Allowed	1st Downs
49ers	1	1	1-0	Steelers	30	7	22
49ers	2	1	2-0	Rams	30	23	21
49ers	3	1	3-0	Giants	30	12	26
49ers	4	1	4-0	Cardinals	35	16	30



### FINAL DATASET

TEAM OPPONENT

RESULT
POINTS SCORED
POINTS ALLOWED
1st DOWNS
TOTAL YARDS GAINED
PASSING YARDS
RUSHING YARDS
TURNOVERS LOST





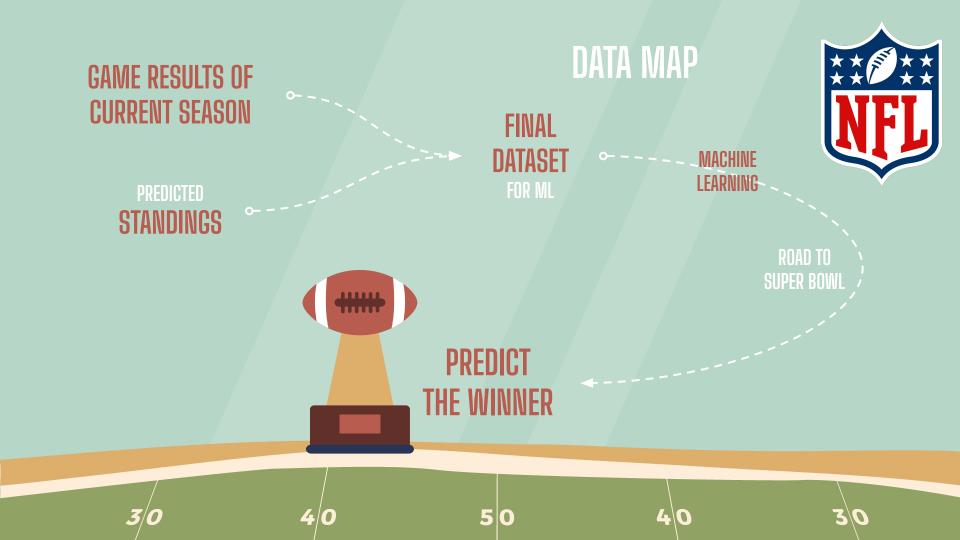
1st DOWNS ALLOWED
TOTAL YARDS ALLOWED
PASSING YARDS ALLOWED

RUSHING YARDS ALLOWED TURNOVERS GAINED

LR STANDING PREDICTION

ADA STANDING PREDICTION

50 40 50 40



## MACHINE LEARNING MODELS





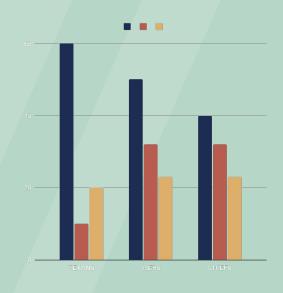
LINEAR REGRESSION



XGBOOST



REGRESSOR



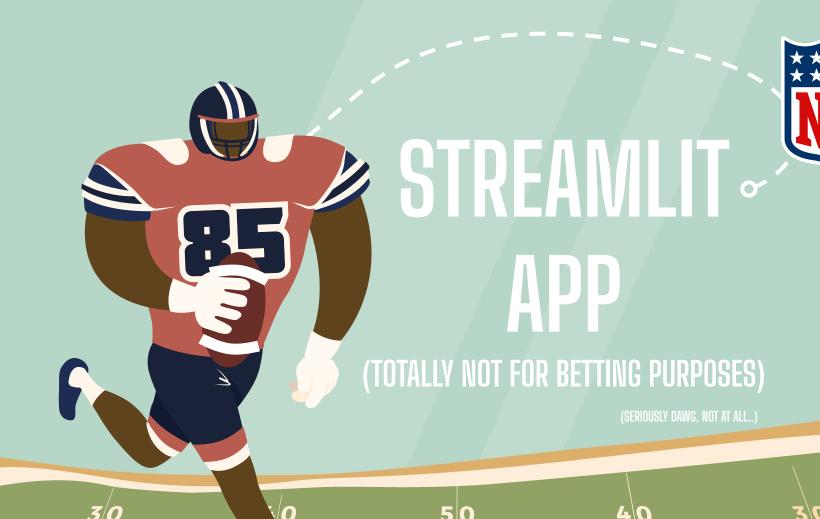
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40

5

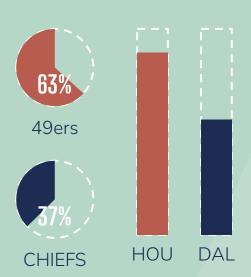
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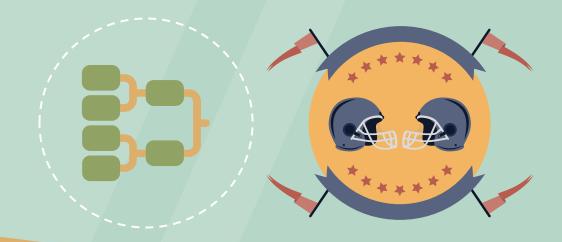


## **STREAMLIT**





Super Bowl or Single Game Match-up





## DEMONSTRATION TIME



#### STRENGTHS

 NEW SEASON, STATS UPDATED WEEKLY



#### WEAKNESSES

- HUMAN FACTOR (PATRICK MAHOMES)
- WEATHER
- INJURIES

# CONCLUSIONS





## THANKS!



