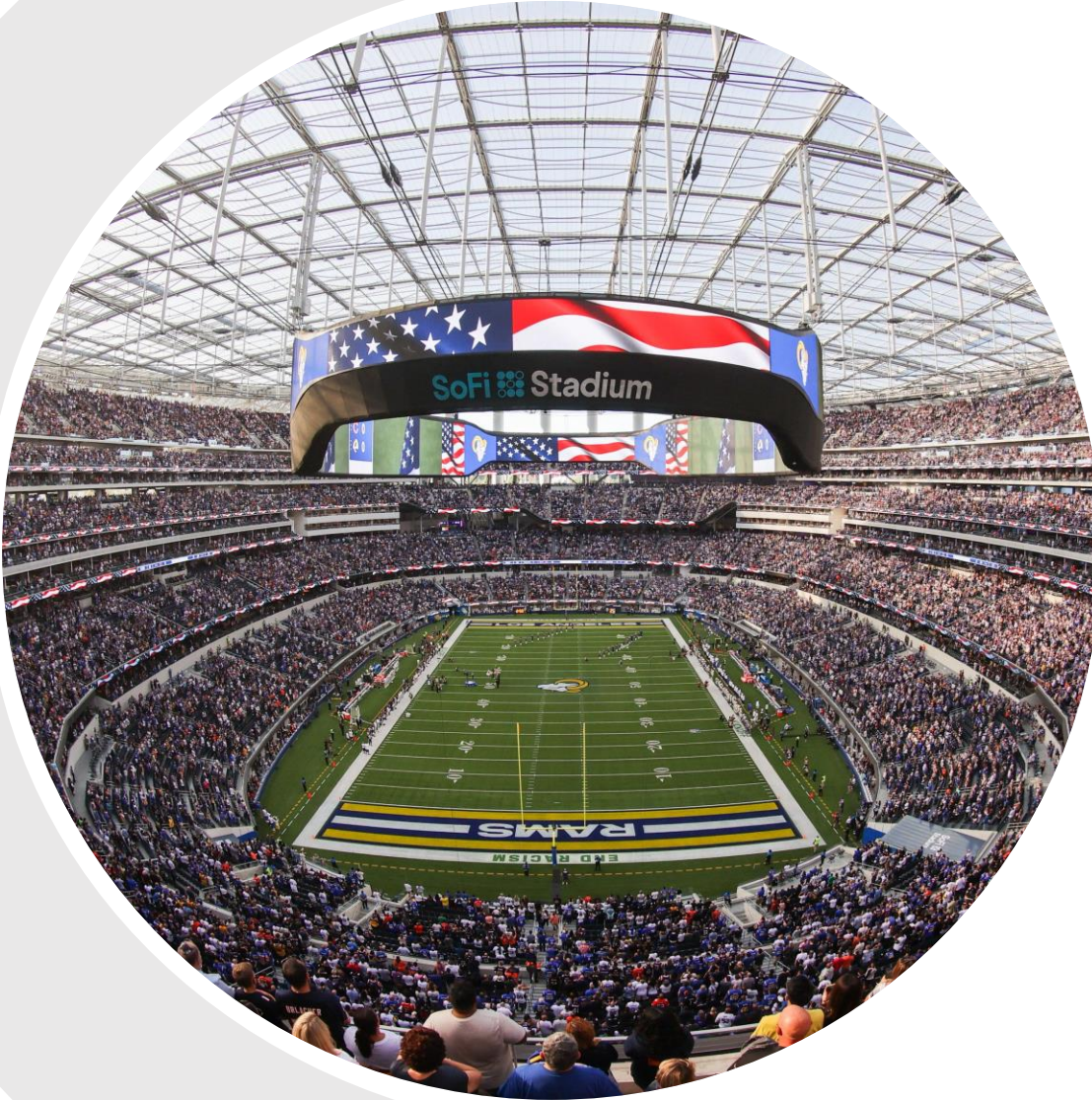




NFL COMBINE + NCAA FOOTBALL DATA ANALYSIS

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AGENDA

- Overview
- Business & Data Understanding
- Modeling
- Evaluation
- Recommendation & Next Steps



NFL SCOUTING COMBINE AND NCAA FOOTBALL STATS



NFL SCOUTING COMBINE

Data from 2009 to 2013

Occurs every February at Lucas Oil Stadium

Attendees perform physical and mental tests



NCAA FOOTBALL

Data from 2009 to 2013

Occurs in the fall every year

57 quantifiable data points per player

BUSINESS UNDERSTANDING

NFL Draft is big money, high stakes

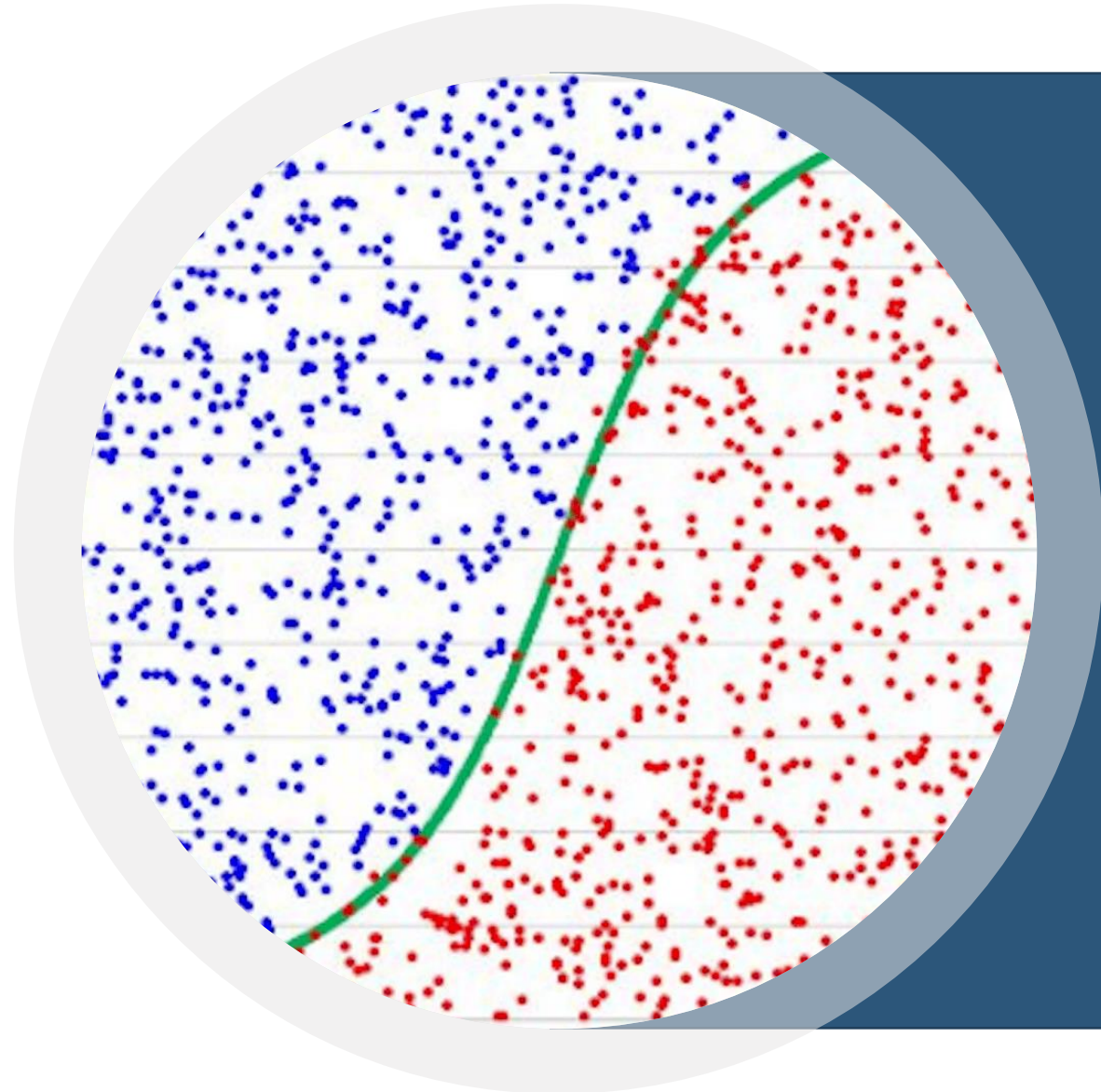
Rigorous selection process

Stakeholders are all 32 teams in the National Football League



MODELING


- Sci-Kit Learn:
 - Iterative Imputer
 - Grid Search CV
- 4 Types of Models:
 - Logistic Regression
 - K-Nearest Neighbors
 - Decision Trees
 - Random Forest



EVALUATION

NFL COMBINE TOP MODEL				
MODEL NAME	ACCURACY SCORE	PRECISION SCORE	RECALL SCORE	F1 SCORE
Logistic Regression L1	0.678	0.704	0.858	0.773

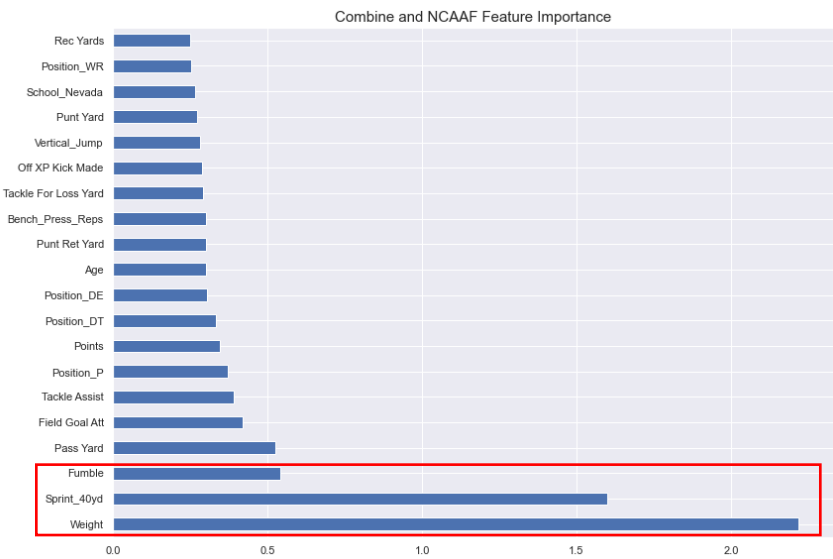
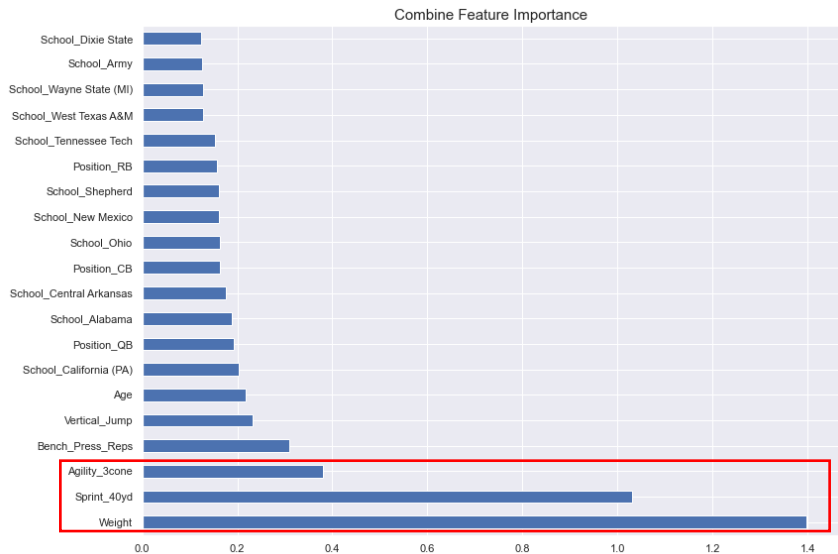
NCAA FOOTBALL STATS WITH NFL COMBINE TOP MODEL				
MODEL NAME	ACCURACY SCORE	PRECISION SCORE	RECALL SCORE	F1 SCORE
Logistic Regression L1	0.710	0.750	0.860	0.801


**+3.2% vs.
Combine Model**



EVALUATION

NFL COMBINE MODEL



NCAA FOOTBALL WITH COMBINE MODEL



RESULTS

- Dummy Model: **64.8% accuracy**
- NFL Combine Model: **67.8% accuracy**
- NCAA Football Stats with NFL

Combine Model: **71.0% accuracy**



RECOMMENDATIONS & NEXT STEPS



Predict whether a player will be drafted

More than physical attributes
Every position is different
Combine is elite talent



Avoid multi million-dollar draft mistakes





THANK YOU



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