Analyzing the NFL Combine

Business Problem

NFL teams scout players each year at the NFL Combine.

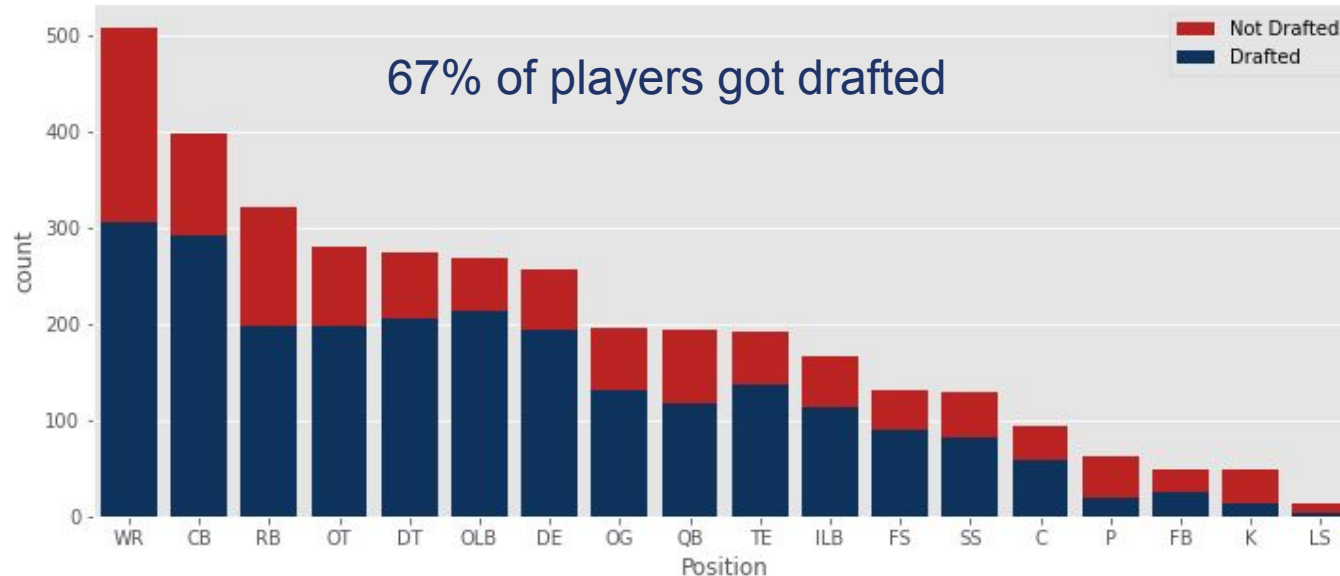| Player's performance at NFL Combine | → | Model | → | Drafted |
| | | | → | Not Drafted |
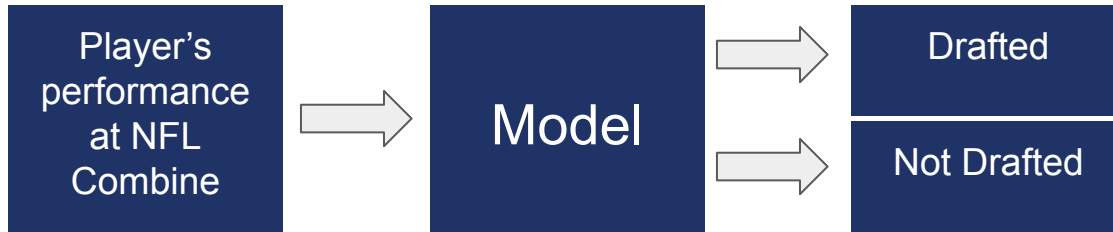
Goal: Create a model that an NFL team could use to shape their draft strategy.

Data: NFL Combine

Includes 6 athletic tests. Data includes 3575 players from 2009 to 2019.

Data also includes physical characteristics and last school attended.

Modeling

Best model achieved 73% accuracy on test data.

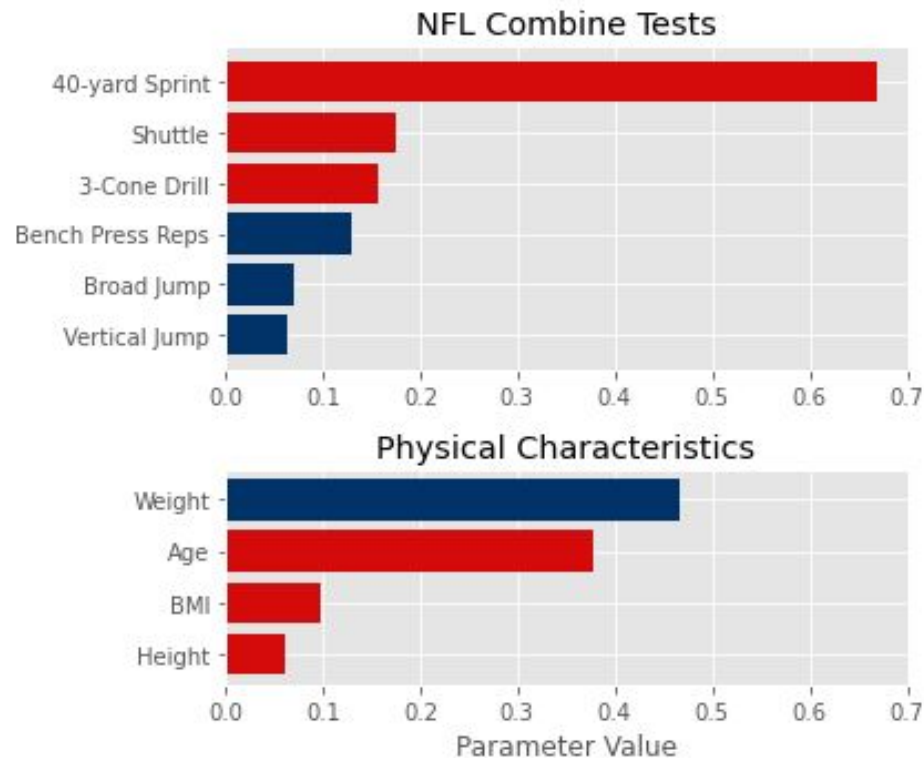Model performed worse on "skill positions" (like quarterbacks)

Model has low false negative rate.

Actual		Predicted	
	Undrafted	98	187
	Drafted	50	528
Correct		Undrafted	Drafted
Wrong		**Predicted**	

Results

40-yard sprint is most important test at the Combine.

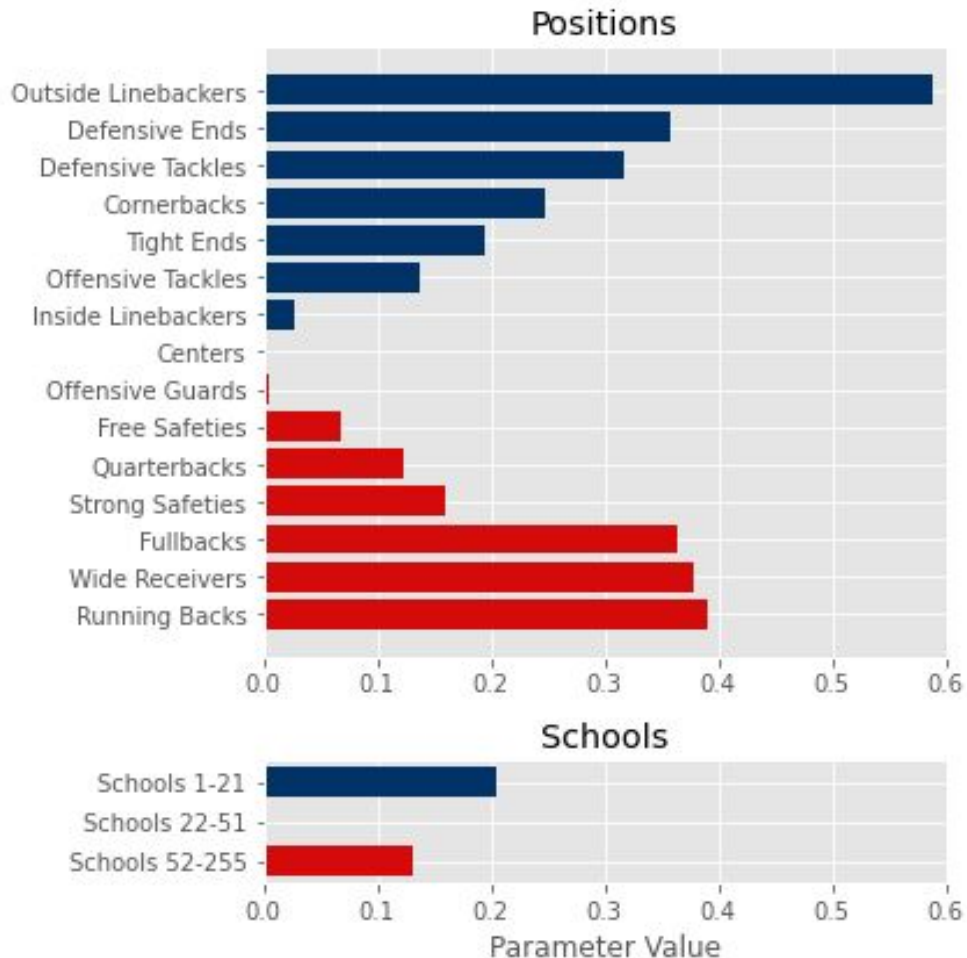Heavier, younger players are preferred.

Results

Outside linebackers and defensive linemen are drafted at higher rates.

Running backs and wide receivers drafted at a lower rate.

Players from larger football programs are drafted more often.

Recommendations

Example: Denver Broncos want to draft John Doe.

| Use late pick or sign John after draft | ← | Prediction: John will not be drafted | ← | **Model** | → | Prediction: John will be drafted | → | Use early pick to select John |

Expect John to be drafted if they are one of fastest at his position.

Use the probability output by the model, not just the prediction.

Thank You

Any Questions?

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GitHub For This Project: https://github.com/daviderics/NFL_Combine_Project

LinkedIn: https://www.linkedin.com/in/david-schenck-57183b264/