Analyzing the NFL Combine

Business Problem



NFL teams scout players each year at the NFL Combine.

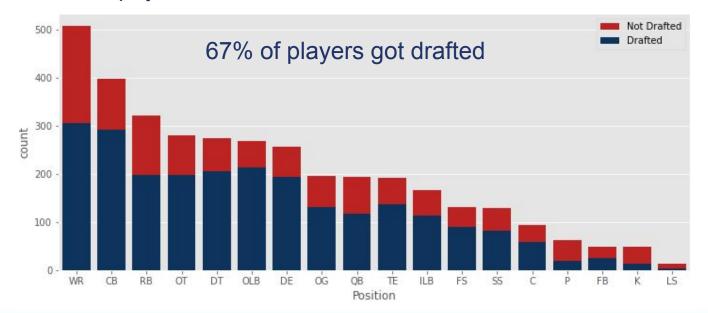


Goal: Create a model that an NFL team could use to shape their draft strategy.

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)

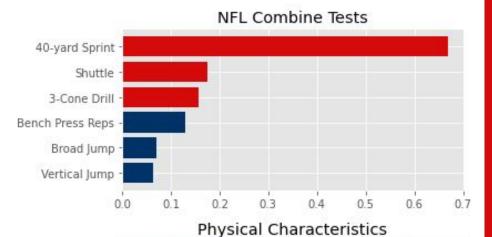
Model has low false negative rate.

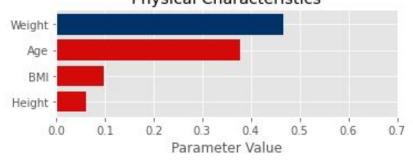
Actual	Undrafted	98	187
Act	Drafted	50	528
Correct		Undrafted	Drafted
Wrong		Predicted	

Results

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

Heavier, younger players are preferred.



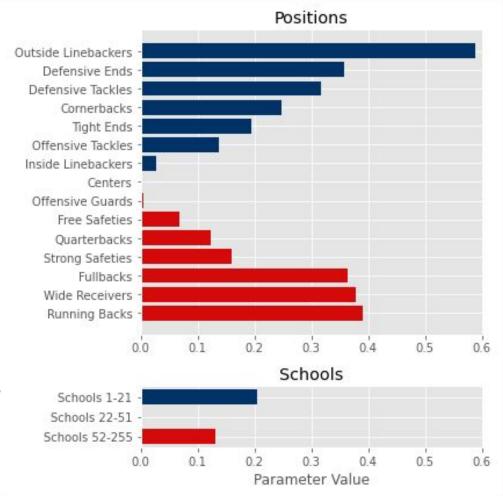


Results

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.

If model says John will be drafted, Broncos should use early pick to select him.

If model says John won't be drafted, Broncos can use a later pick or sign him after the draft.

I would strongly recommend a team looks at the probability output by the model, not just its 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/