MODULE 5 PROJECT

Classification Modelling of NFL Rushing Plays

BIG DATA BOWL

FLATIRON SCHOOL

OBJECTIVE

Build a model to predict whether a given rushing play will be successful.

ABOUT THE DATA

- NFL Next Gen Stats
- Player Tracking Data
- At time of handoff
- 2017, 2018, and 2019 (week 12)
- NFL Big Data Bowl
- Revised to Classification

METHODOLOGY

01 Obtain

02 Scrub

03 Explore

04 Model

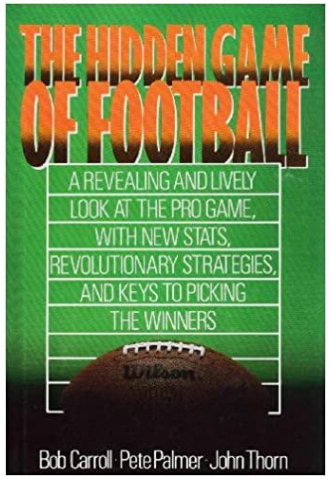
05 Interpret

MEASUREMENT

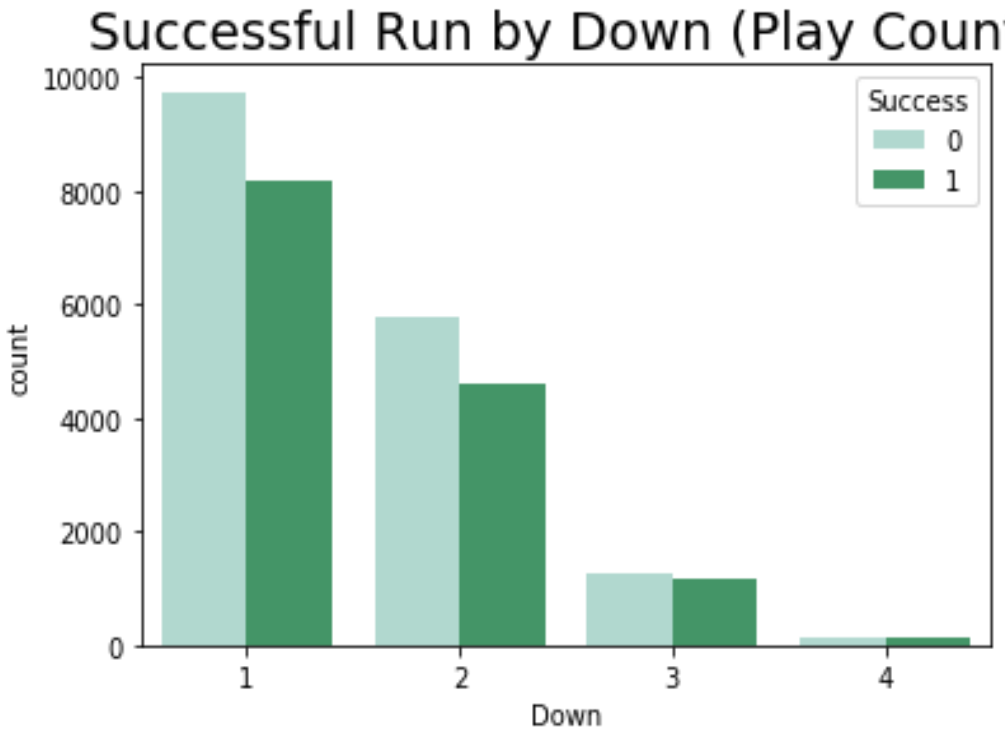
1st Down: 40%

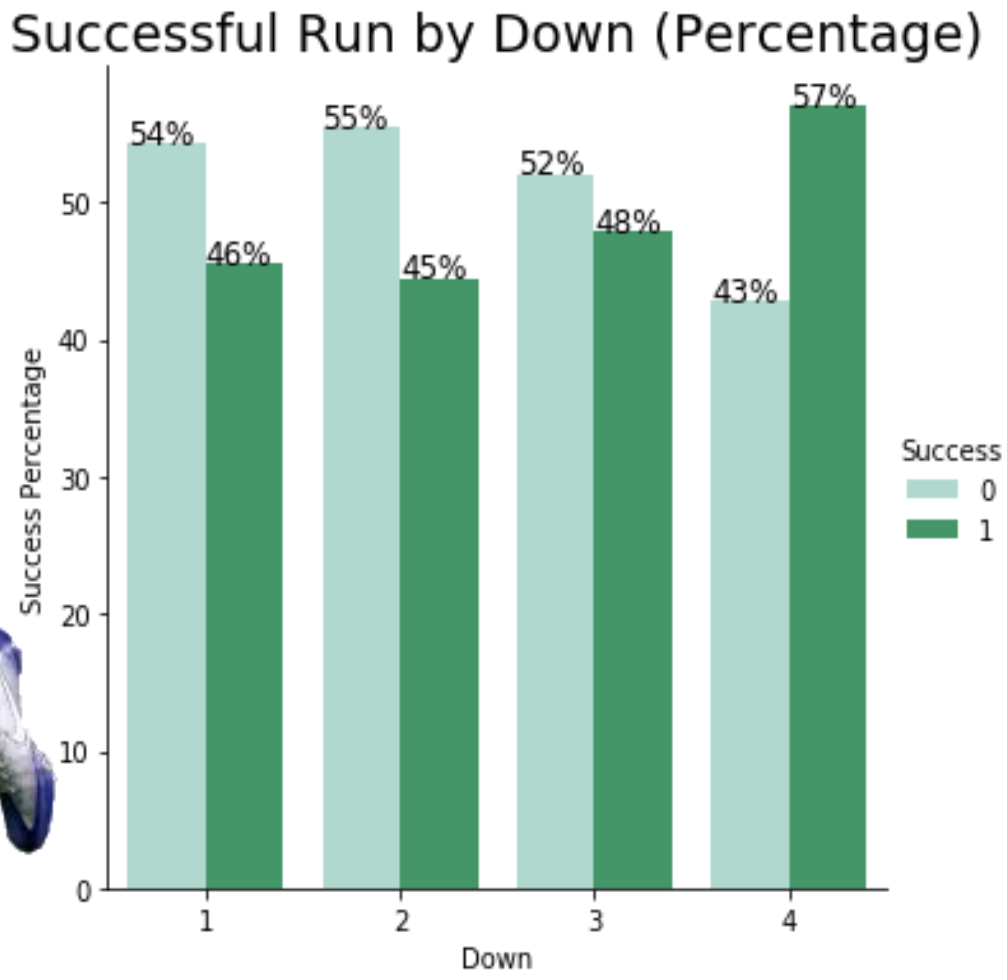
2nd Down: 60%

3rd & 4th Down: 100%



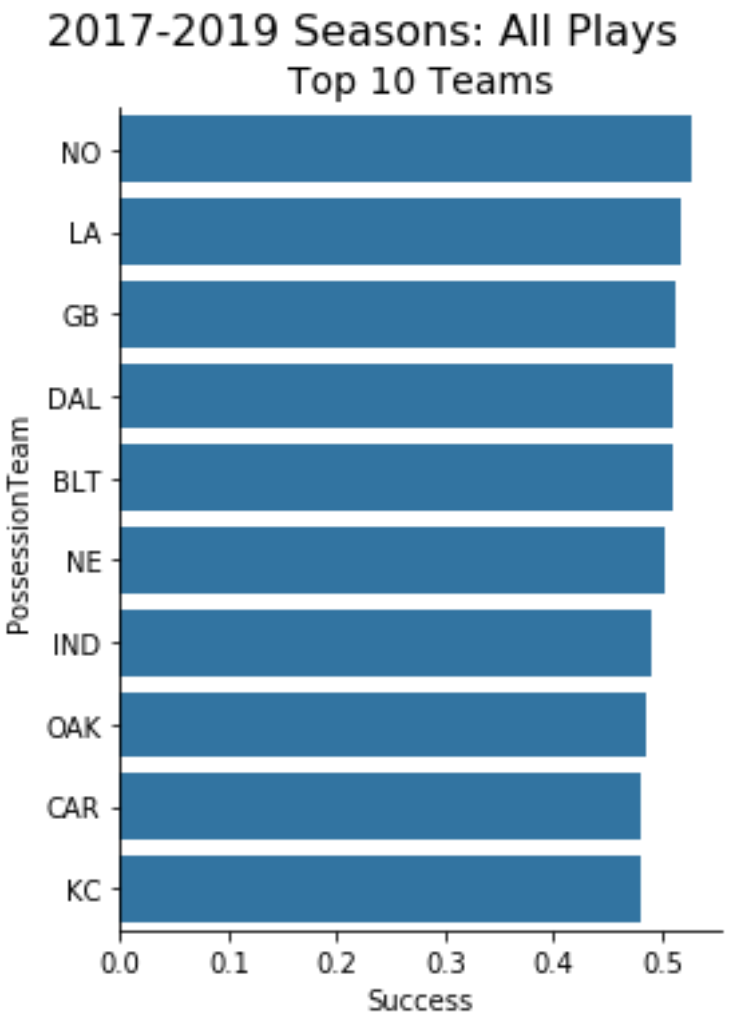
SUCCESS BY DOWN

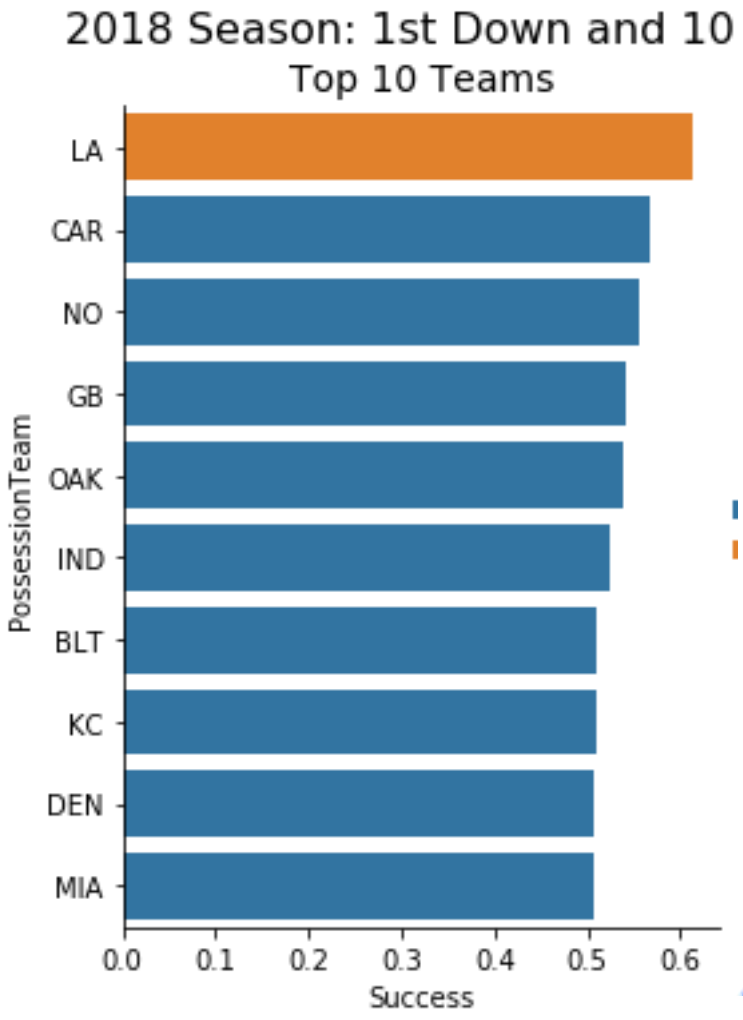




SUCCESS BY TEAM

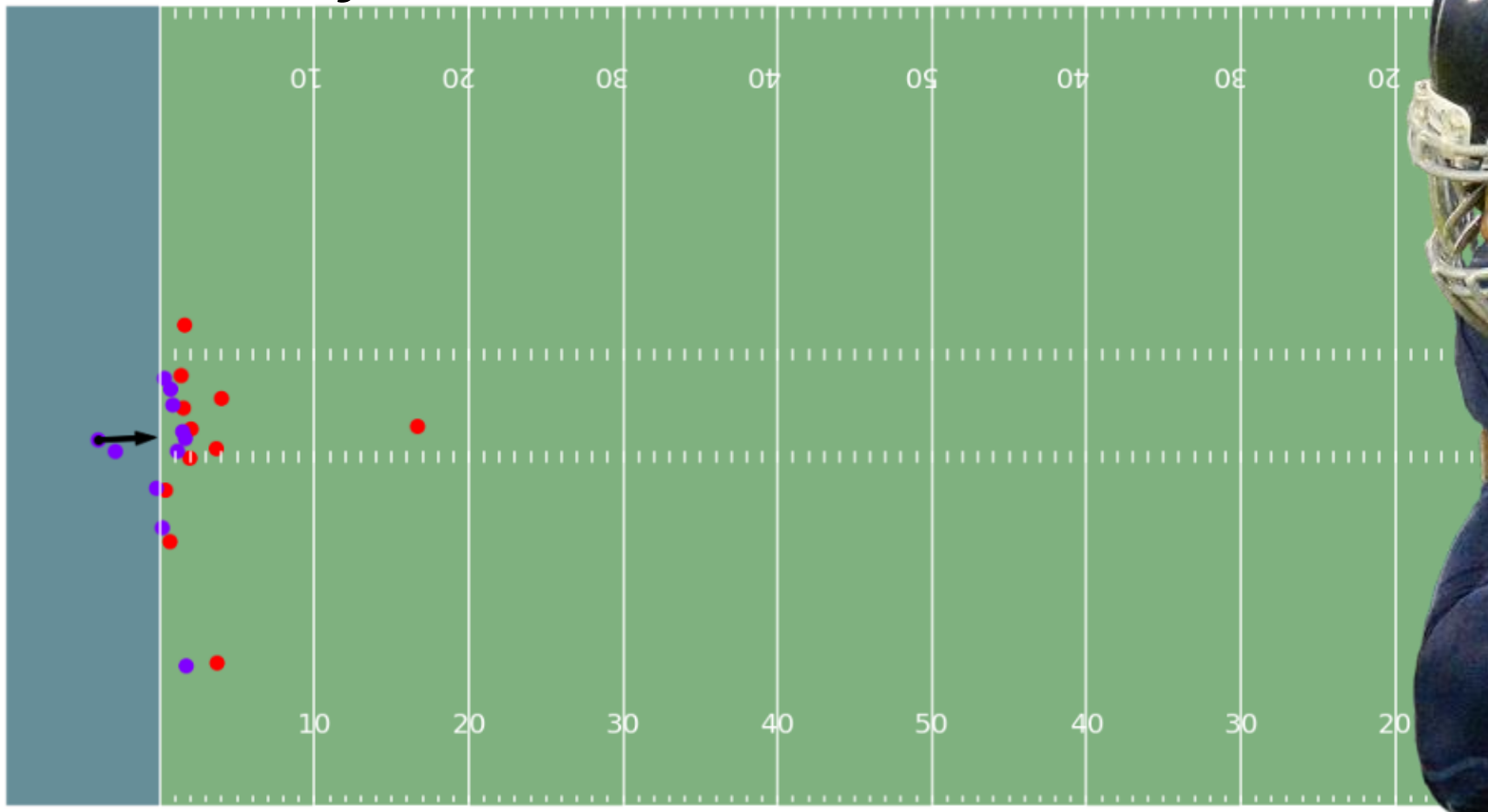
Success **Percentage** by Team





BEST PLAY IN THE DATASET

December 6 2018. Titans vs Jaguars
Derrick Henry Rushes for a 99 Yard Touchdown



RESULTS

MODEL PREDICTIONS

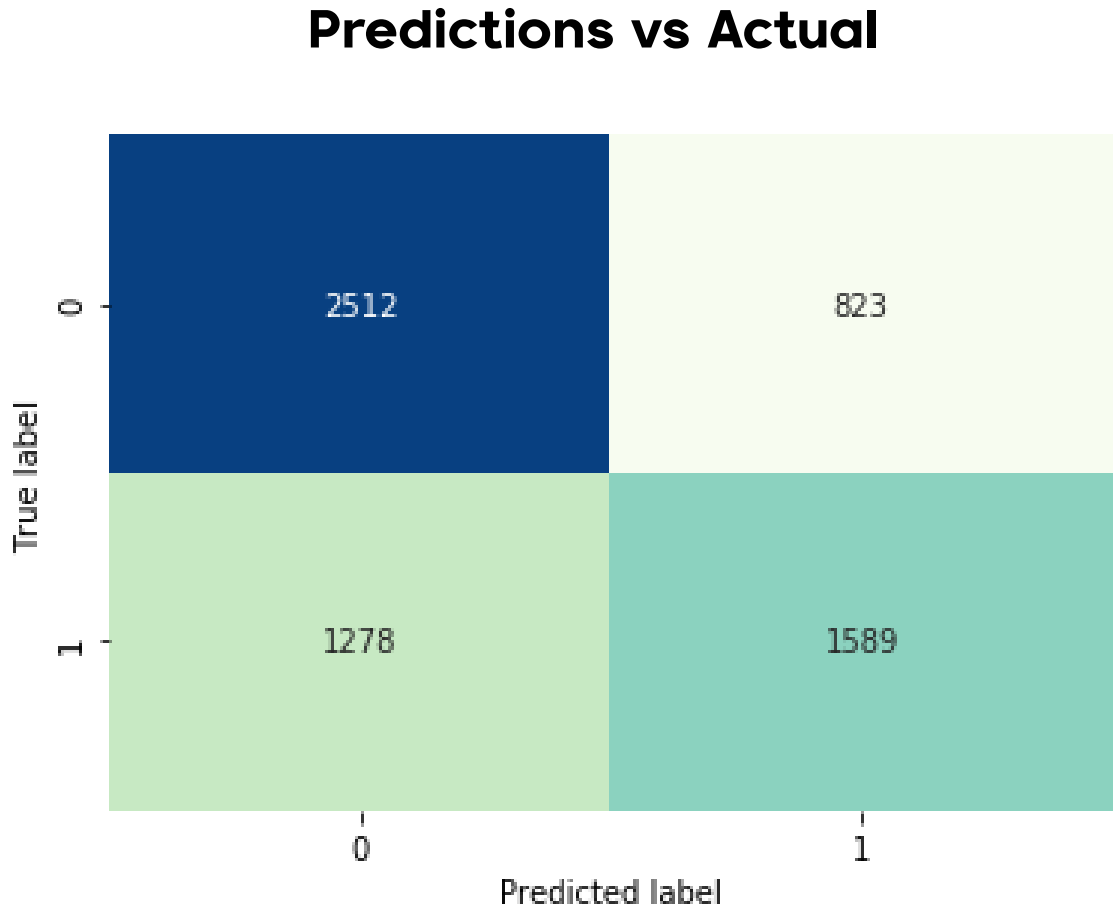
66%

Accuracy

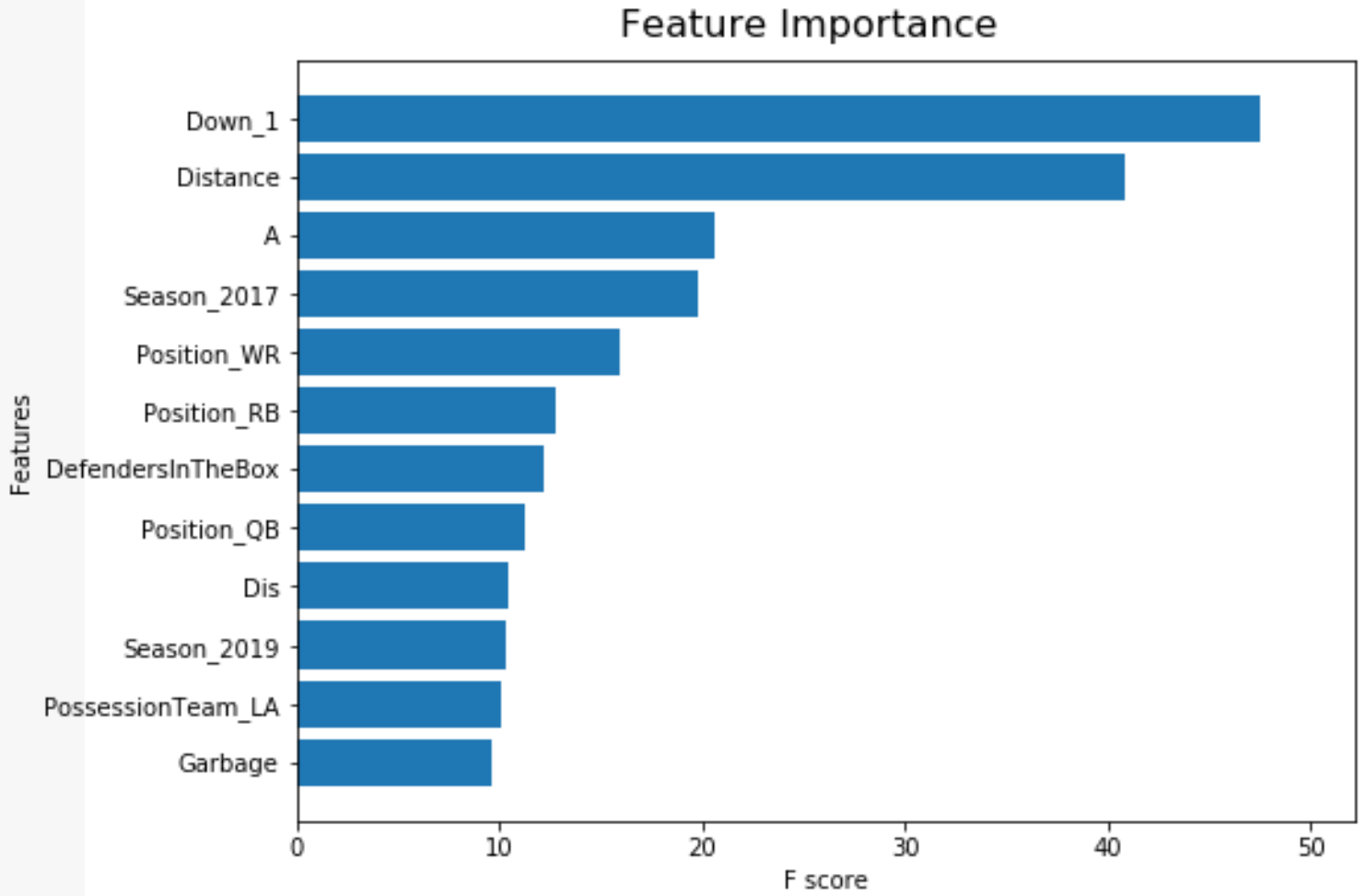
60%

F1 Score

Are predictions accurate and are they and comprehensive?



FEATURE IMPORTANCE



RECOMMENDATIONS

- **Acceleration Emphasis**
- **Defenders in the Box**
- **First Down Focus**
- **Position Experiment**
- **Season Changes**

NEXT STEPS

- Feature Experiment
- Additional Data
- Hypothesis Test
- Season to Season
- Injury Impact
- Conditional Analysis
- Advanced Data Generation

VAPOR STRIKE
THANK YOU