NFL Big Data Bowl Submission

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### Project Goal

The goal of this project was to analyze NFL tracking data and develop a model to predict the likelihood of making a tackle. We then applied that value to player data and ranked players based on ETSR and Tackle Index.

### Steps

1. Combine all data including game, play, tackles, players, and tracking
2. Generate additional features based on research (relative velocity, relative position, standardized orientation, momentum, etc)
3. Select plays that either resulted in a tackle or a missed tackle (exclude assists) to get the final data for classification
4. Compare initial models for predicting a successful tackle.
5. Tune models and blend final models.
6. Generate ETSR and tackle index for each player.

### Summary/Next Steps

The next steps for this project include feeding the model new data to determine how players' ETSR changed by season. By doing this we can see if the ETSR works as expected and if the tackle index is fairly consistent. We can also analyze additional edge cases that the model fails to classify to understand the components of a "good" tackle.