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Final Project Proposal
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Football Stats Proposal

We have data on every NFL play from 2009 - 2018 that gives us play statistics and team information. Our data gives us info such as the field position, what the down and distance to a first down was, what kind of play was run, and how successful the play was. We plan to put this data into a database similar to what we did in homework 4. We will use the data to query for specific questions that can be asked, such as when an offense is in a certain situation, i.e. 1st and 10 on their own 35 yard line, what play were they most likely to call, and what was the typical result of the play compared to the frequency of the opposite and how successful that was. This would be interesting for fans and analysts to see because it would provide insight as to what teams were calling most consistently and how successful they were doing it in given situations. Teams may even find this interesting about themselves to see their own habits and how productive or unproductive they were. Based on this data they may switch up their play calls in the future to try and find a more effective option.

Our goal with the front end of the website will be to guide the user, starting at a season and specific team they chose, to create a situation by making them pick parameters such as, what quarter it is, the down and distance, the time on the clock, where they are on the field, etc.. Then once the team and situation are set, we will query those plays that match the parameters and use a script to analyze which play was the most successful based on yards given and points scored on a play. Therefore, the user can, for a specific team and a created situation see the average yards that each run play and pass play got in that situation.

The backend analytical side of the website will query the database of stored NFL play data, and based on the given request of the user will return average play data for a given team and situation.

This is the link to the raw data:
https://www.kaggle.com/maxhorowitz/nflplaybyplay2009to2016/version/6#NFL%20Play%20by%20Play%202009-2016%20(v3).csv