1. **Project Title: Fantasy Research Assistant**
2. **Project Summary (Antanas)**

We aim to build a web application that assists NFL Fantasy players in making a data-driven decision about their NFL Fantasy Team and tracking their team. The problem we are trying to solve is that there is a lot of data that a fantasy player needs to consume, process, and analyze to make an informed decision on selecting players/team performance and information. We want to simplify the process for users to be able to compare players, and teams, and calculate statistics that they can use for their fantasy game. We also want a user to be able to input their team and track players so that they can track their progress. We want to include a feature to run analytics on the users' current roster to see what areas they are struggling with and track their progress.

3. **Description (Varshitha)**

Our web application will use the Kaggle NFL Statistics dataset to enable the user to research potential picks for their fantasy football team. Fantasy players have difficulty picking teams in a draft because of the sheer quantity of data. Our application aims to decrease confusion in fantasy players when it comes to predicting an NFL player's performance in the upcoming season by compiling existing data and giving the user an opportunity to analyze the data. The user will be able to perform player analysis by comparing the stats of teams and players, looking at existing trends for each stat, and projecting predictive numbers to help the user make informed decisions. In addition, we are considering adding more interactive features for the user such as fantasy team analysis and progress tracking.

4. **Technically Challenging Features (Ashrith)**
    a. The hard part of this project is creating useful insights from past data. We need to find a way to quantify projected performance and creating that metric and ranking players with that will be challenging to implement.

5. **Usefulness (Naman G)**
    a. Since there is a lot of NFL data, simplifying the lookup process helps the user make data-driven decisions on their fantasy team. The complexity of drafting players decreases significantly.
    b. The ease of use factor is strong through the Fantasy Research Assistant. This streamlined process saves users time and effort, improving their overall Fantasy Football experience.
    c. The tool allows users to easily compare NFL players and teams based on key statistics, helping them determine which players are performing better in specific categories, like yardage, touchdowns, or consistency.

6. **Realness (Naman G)**
    a. Having a feature to compare 2 NFL players will allow users to make accurate decisions and compare players themselves.

b. Giving players Fantasy based on multiple categories helps users win games against their opponents.
c. This side-by-side comparison allows users to independently analyze performance data instead of relying on preset rankings or expert analysis.
d. Incorporating Fantasy Football data like projected points, player consistency, and position-specific stats enhances users' chances of winning.
e. We plan on using the kaggle dataset from the NFL
https://www.kaggle.com/datasets/kendallgillies/nflstatistics
f. The data has multiple different data sets ranging from 10,000 to 20,000 rows containing 17-30 columns
g. The data source captures players career stats, basic stats, game records, and statistics on the different players from punters, quarterbacks, runningbacks, and different positions.
h. We believe that this one dataset is fine because it encompasses multiple datasets we can choose from

7. **Description of functionality (Varshitha/Antanas)**

a. We want the user to be able to interact with the database by being able to add/delete and create watchlists of players.
b. We want players to be able to see the cumulative stats of a single player, multiple players and to be able to compare teams/players to make an informed decision. We think that we would have a lot of opportunities to create complex and interesting queries using the information we learned in class.
c. In the user interface we were thinking about being able to select all players from either a team or have a certain quality that the user is looking for and then the players get populated in a line format below it is padded nicely.
d. We want the user to be able to input their fantasy team and track their progress and analyze the functionality of their team.

8. **Project Work Distribution (Antanas)**
a. We plan on splitting key features by person so everyone has a chance to implement the SQL code
b. In part to each feature like creating the comparison between players (Varshitha), creating the user profile (Antanas) and allowing them to track players (Ashrith), or comparing teams (Naman). Each person on the team will be responsible for creating their ui components on our main application.
c. We plan on creating the main boiler plate and start together so that everyone is on the same page and is able to push to the repo.
d. We will also go over proper procedures like working on branches and then getting these branches approved when we do PRs

9. Low Fidelity UI Mockup

Fantasy Football Research Assistant

Search for a player 🔍

Top picks of the season!
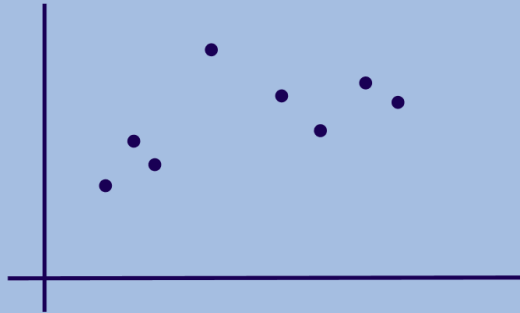
👤 Tom Brady   👤 Tom Brady

👤 Tom Brady   👤 Tom Brady

Player Stats

👤 Tom Brady

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Compare players

👤 Tom Brady

👤 Tim Brady

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