

# CIS 761 Class Project - Project Proposal

## Team

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## Overview

This project will model NFL data for a sports network using a PostgreSQL database. The database will contain data regarding players, positions, teams, venues, games, and plays within each game. The application will allow users to obtain information regarding their favorite players or teams, and allow them to view statistics for players, teams, and games. The data will be obtained through a publically available ESPN API.

## Requirements

- Teams will be identified by a team name and have attributes location, abbreviation, primary color, and secondary color.
- Athletes will be identified by an athlete ID and have attributes date of birth, birth city, birth state, first name, last name, height, and weight.
- A player can play for many teams in their career, and a team can have many players.
- Each position will be identified by a position name and have attributes abbreviation and platoon (offense, defense, or special teams).
- A position can be played by many players and a player can play many positions in different games. However, a player can only play a single position within a game.
- Venues will be identified by a name and have attributes capacity, city, state, grass (boolean), and indoor (boolean).
- A venue can have many home teams (ex. MetLife Stadium), but a team must have exactly one venue.
- Games will be identified by a game ID and have attributes attendance, date, and utc\_time.
- Many games can be played at a given venue, but each game must be played at exactly one venue.
- The NFL schedule will be identified by the date and have attributes season\_year, season\_type, and week.
- Many games may be played on a given date, but each game must occur on exactly one date.
- Each game must have exactly one home team and one away team. Each team can play in many games.
- Scores in each quarter (linescores) will be identified by the game its played in, the team it corresponds to, and quarter and have attributes score.

- Games and teams can have many linescores.
- Each play will be identified by a play ID and have attributes play type, play text, quarter, seconds remaining in quarter, score value, start down, and end down.
- A game can have many plays, and each player can be associated with many plays in each game. Additionally, a play can involve many players.