

Alexander Pacheco

Thomas Vogt

Nathan Conway

Stage 3 Report

At the bottom of this report you can find the planned relational schema and functional dependencies for our database. Our group decided on MySQL as the relational database and Python/Flask for the programming language. Our basic attributes including Player Name, Class (ex: Junior/Senior), Conference Name, Receiving TD's, Team Receiving Yards, Receiving Yards, Team Name, and QB Rating we will get from the NCAA database. An example link with this just the receiving data is: <https://www.ncaa.com/stats/football/fbs/current/individual/455>. RAS Score (Relative Athletic Score) which “can easily and intuitively gauge a player’s athletic abilities relative to the position they play and provide tools to contrast and compare based on known measurables”. This statistic will come from <https://ras.football/ras-compare/>. Conference Strength will be used to measure the strength of opponents the players face which will be our own generated numbers to rate the level of difficulty between conferences. 3rd down Usage is the amount of targets the player received on 3rd downs which can measure their ability to get open on designated passing downs. This statistic will come from <https://collegefootballdata.com/exporter/player/usage?year=2022&conference=SEC&position=WR&excludeGarbageTime=false>. Our final two advanced statistics are “Dominator Rating” and “Breakout Age” which are defined by “the dominator rating is the percentage of team receiving production.” and “their age at the beginning of the college football season when they first posted a Dominator Rating at or above 20%” respectively. We will pull these two statistics from playerprofiler, an example is: <https://www.playerprofiler.com/nfl/jordan-addison/>.

Moving onto labor division and our project timeline, Alexander and Nathan will primarily focus on everything MySQL while Thomas will focus on tasks involving Flask/Python.

As for our current project timeline, it can be found below:

- Week 11: SQL Practice
- Week 12: Learn how to pull data from our resources
- Week 13: Putting data together and working on HTML basics for website
- Week 14: Work on developing advanced function formula and Combine SQL/HTML/Python
- Week 15: Work on basic functions, finalize advanced function
- Week 16: Final Touches, Presentation Practice

Player(Name, Class, RAS)
FD: Name -> Class, RAS

Conference(Conference Name, Conference Strength)
FD: Conference Name -> Conference Strength

Stats(Receiving TD's, 3rd Down Usage)
FD: None

Advanced Stats(Team Yards, Dominator Rating, Receiving yards, Breakout Age)
FD: Yards, Team Yards -> Dominator Rating
Dominator Rating -> Breakout Age

Team(Team Name, QB Rating)
FD: Team Name -> QB Rating

Relationships:
Produces(Player, Stats)
Plays for(Player, Team)
Plays in(Team, Conference)