Graphical Analysis of NFL Combine Data

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***Abstract*—For the IELAB Fall 2019 final project we used Sports Database E which included NFL combine data. We chose to only focus on the first data sheet, we included a majority of the significant statistics. The data includes names of players, their colleges/home state, their draft rounds, and their physical attributes (bench press, wonderlic, etc.).**

***Index Terms*— NFL Combine Data Analytics, College Player Data Analytics, College Football Data Analytics, Sports Visualization**

I. Introduction

IN this project, we tried to find an association between various factors involved in football. Some of these factors include physical attributes and intelligence scores. We also try to estimate how many NFL draft picks a specific school will have using previous data.

This section can be divided into three main subsections:

- **Dataset description** In these 8,200 lines of data, the dataset described: Football player physical/mental data, geographical data, and NFL draft picks.
- **Visualization** We used two maps of America and two bar graphs
- **Results and Analysis** Only four states have college players that literate and IL has the highest college wins of those states. After researching average player physical attributes, an average player generally has a lower draft round. We estimate that Rutgers will have 5 NFL picks in both 2013 and 2014.

II. Visualization User Manual

A. Chart 1: Intelligence and College Wins by State

After researching the wonderlic score needed to be considered literate, we created a map in which the states with literate players are highlighted in red. Illinois the state with the most wins and also has literate players. This is shown by being highlighted with the darkest red. We came to the conclusion that most states do not have literate players according to the data provided.

B. Chart 2: Average Physical Attribute Data and Draft Round

We researched average player physical attributes and inputted the data into filters. The bar graph shows the players that have average physical attributes, and the draft round they were picked into the NFL. It shows at what draft round the players were picked using color and bar length. The darker and shorter the bar, the faster the player was picked. An average physical player generally has a lower draft round.

C. Chart 3: Height and Interceptions by State

The map graph shows the relationship between the height of players and the number of interceptions by state. The number of interceptions is depicted by the shade of red each dot has on the map. The darker the dot, the more interceptions the state had. The height of the player is depicted by the size of the dot, the bigger the dot, the bigger the state average height. We came to the conclusion that there is not much correlation between height of players and number of interceptions even though it may seem like it

D. Chart 4: Estimated NFL Draft Picks for Rutgers

Using 1999-2012 NFL draft pick data for Rutgers University, we were able to estimate the number of NFL Draft picks for Rutgers University in 2013 and 2014. The lower the bar, then the lower the draft round. The darker blue was previous year data, and the lighter blue was the estimated data. The estimated data was inaccurate, however, as there are several other factors that were not considered (coaches, skill level of players, etc.). Rutgers University had 7 NFL draft picks in 2013 and zero in 2014.

E. Dashboard A

This dashboard had *Intelligence and College Wins by State* and *Average Physical Attribute Data and Draft Round*. We put these two charts on this dashboard because both charts compare player performance and have the same color. By doing this, the audience can see what factors affects wins and draft round overall.

F. Dashboard B

This dashboard had *Height and Interceptions by State* and *Estimated NFL Draft Picks for Rutgers*. We put these two charts on this dashboard because we wanted to show the estimated draft pick chart after the audience learned about all the factors involved in the draft. This way, they could see how all factors are incorporated when drafting a college player to the NFL.

G. Story A

On page one we put dashboard one and one page two we put dashboard two. This was the audience learned about all the factors involved in the draft and then saw an estimated number of draft picks for Rutgers.