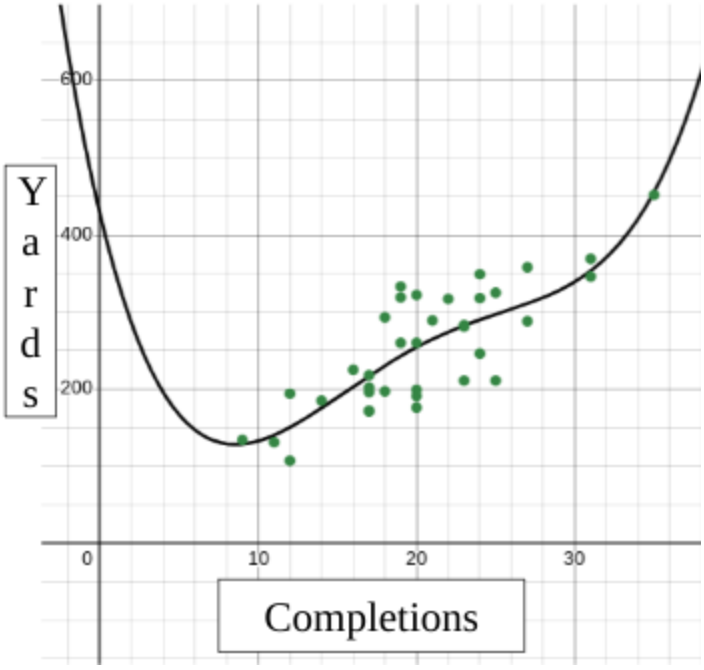
Quinn Ewers Regression Project Report

Which do you believe is more important, a quarterback's number of completions, or number of yards passed? Are the two correlated? Do more completions always mean more yards? These were questions that I had been wondering about for some time. This project allowed me the opportunity to examine Quinn Ewer's career stats while playing for the Longhorns. Ewers had 36 career starts, over which time he had a 737 completions (64.9% completion rate) for 9,128 yards. But how did he do in each game, and more importantly, to whom does this matter? For one, Vegas linemakers may want this data in order to create an over/under line for sportsbetters. NFL scouts may also use this data to see how efficient a quarterback is. I'll discuss more about both of these later.



Shown on the left is the scatterplot of Quinn Ewers' career completions for passing yards. The data points show that most games were at around 20 completions for 250 yards, with a few outliers such as the 35 completion 452 yard game on the top right. The trend is generally upward as you move left to right, meaning that **generally, the more completions he throws in a game, the more yards he passes for.** Because this is a quartic regression, the y-intercept has no real meaning.

The r^2 value of this regression is 0.6695, indicating a strong fit. This means that the line of best fit is pretty accurate to the data. The line runs almost directly through 6 points, which corresponds to 6 games:

- 2023 vs Oklahoma State (Big 12 Championship) (35 completions, 452 yards)
- 2023 vs Oklahoma (31 completions, 346 yards)
- 2023 vs Iowa State (23 completions, 281 yards)
- 2024 vs Ohio State (College Football Playoff semifinal) (23 completions, 283 yards)
- 2024 vs Texas A&M (17 completions, 218 yards)
- 2022 vs Alabama (9 completions, 134 yards)

For the inputs of 35, 31, 23, 17, and 9, you will get an output within 10 yards of the actual data point. (455.6, 353.3, 282.3, 217.2, 128.6 respectively).

As mentioned before, this data can be valuable to linemakers. For a given game, for example, a linemaker may make player prop bets of over/under Ewers' median of 253 yards, or over/under his median of 20 completions. This is important now more than ever with the rise of sportsbetting, as the companies that run sportsbooks need to set lines in which enough people win to where they'll return and bet more, but also have enough losers to where the company makes money. Another career that may use this data are professional scouts. Scouts may use this data to determine the efficiency of quarterback prospects. Coaches and scouts often look for players that are efficient, so they'd be looking for quarterbacks who have high yardage, high completion games. This career is important in popular culture because fans of NFL franchises hope that their team's scouts are able to find good recruits that'll make an impact for their team.

Overall, Quinn Ewers' career completions-to-yards can be predicted with a fair amount of certainty using a quartic line. While there are many games in which Ewers threw for more or less yards than expected for a given amount of completions, the line of best fit demonstrates a general upwards trend going left-to-right on the graph, with the line of fit being so strong that multiple games are within just 10 yards of the line. This shows that Ewers was generally a pretty consistent quarterback, and you can say with a high level of certainty that the more completions he threw for in a game, the more yards he threw for.

Works Cited

"Quinn Ewers Gamelog." *sports-reference.com*, https://www.sports-reference.com/cfb/players/quinn-ewers-1/gamelog/