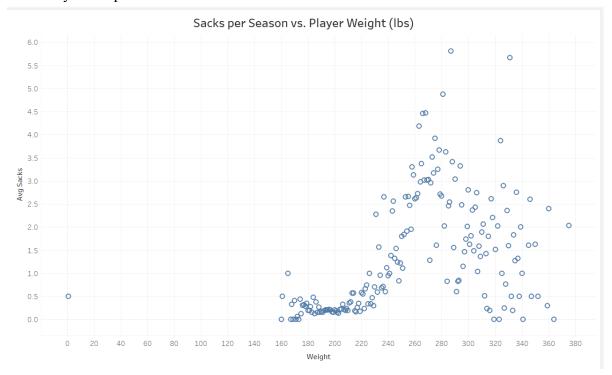
## **BUSINESS QUESTIONS & RESULTS**

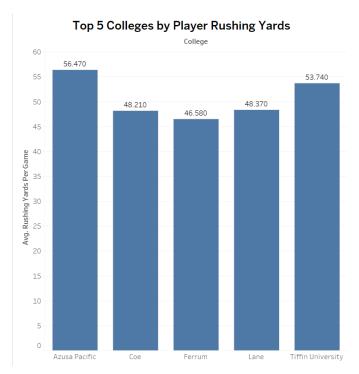
**QUESTION 1:** Is there a correlation between the weight of defensive players and the number of sacks they make per season?



**INSIGHTS:** The scatter plot suggests a parabolic relationship between player weight and sacks per season, indicating that defensive players of a moderate weight range (260-280 lbs) tend to have higher sack numbers. This could imply that there is an optimal weight for peak performance in terms of sacks made by defensive players.

**BUSINESS VALUE:** Identifying the weight range that relates with peak performance in sacks per season allows businesses to optimize recruitment and training. This can lead to stronger on-field results, heightened fan engagement, and increased profitability for the franchise.

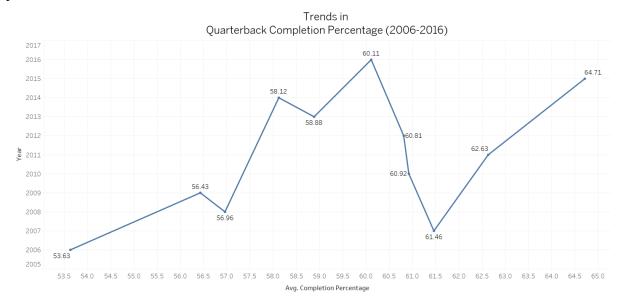
**QUESTION 2:** Which are the top 5 colleges in terms of producing players with the highest average rushing yards per game?



**INSIGHTS:** The bar chart lists the top 5 colleges producing players with the highest average rushing yards per game. This suggests that these colleges may have effective football programs and coaching for developing rushing talent in their players.

**BUSINESS VALUE:** Scout and recruit from these colleges to enhance team rushing capabilities. Consider investments in college athletic programs with high output in rushing yards.

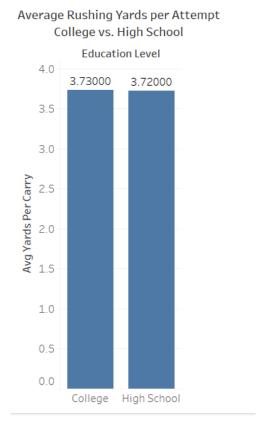
**QUESTION 3:** How has the average completion percentage changed for quarterbacks over the past decade?



**INSIGHTS:** The line graph shows a positive trend in quarterback completion percentages from 2006 to 2016, with a general increase aside from a temporary drop around 2012-2013. The completion rate improved significantly from approximately 53.63% to 64.71%.

**BUSINESS VALUE:** Such data can help teams invest in training programs that emphasize accuracy and enhance completion rates. Coaches may adjust strategies to leverage the increasing effectiveness of passing plays.

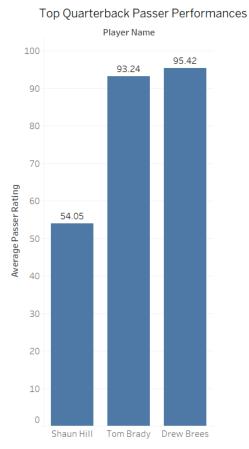
**QUESTION 4:** How does the average rushing yards per attempt compare between players who attended college versus those who came directly from high school?



**INSIGHTS:** The bar graph shows a marginal difference in average rushing yards per attempt between players who attended college (3.7300 yards) and those who came directly from high school (3.7200 yards). The insight suggests that college experience may have a minimal impact on this particular statistic for rushing performance.

**BUSINESS VALUE:** Scouting and drafting strategies might not need to heavily favor college players for their rushing skills, allowing for a broader and more diverse pool of talent to be considered. This could also influence scholarship and training investments at the high school level, emphasizing the development of skills that are not significantly enhanced at the college level.

**QUESTION 5:** Which quarterbacks who have at least 15 seasons of recorded statistics demonstrate the greatest consistency in their passing performance, as evidenced by their career passer rating?



**INSIGHTS:** The visualization indicates that among the quarterbacks who have at least 15 seasons of recorded statistics, Tom Brady and Drew Brees have demonstrated greater consistency in their passing performance compared to Shaun Hill, as shown by their higher career passer ratings. This suggests their elite status and consistent performance.

**BUSINESS VALUE:** Such insights are valuable for teams to enhance quarterback training, potentially leading to better team success. Additionally, recognizing and promoting consistent elite performance can engage fans more deeply, improving ticket sales, viewership, and merchandise revenue.

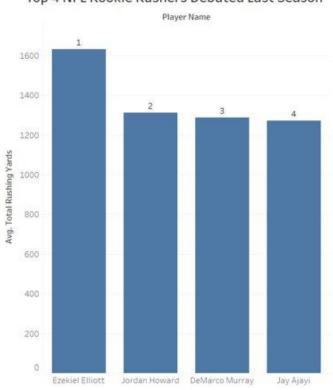
**QUESTION 6:** Which running back players, who have participated in at least 15 games, have experienced a decrease in rushing yards but an increase in rushing touchdowns compared to the previous year, focusing on the last five years?

	PlayerID	PlayerName	Year	RushingYards	RushingTDs
•	dukejohnson/2552461	Duke Johnson	2016	358	1
	frankgore/2506404	Frank Gore	2015	967	6
	jeremyhill/2543603	Jeremy Hill	2015	794	11
	jerickmckinnon/2543715	Jerick McKinnon	2015	271	2
	alfredmorris/2533457	Alfred Morris	2014	1074	8
	bennycunningham/2541544	Benny Cunningham	2014	246	3
	chrisivory/2507999	Chris Ivory	2014	821	6
	bernardpierce/2533545	Bernard Pierce	2013	436	2
	frankgore/2506404	Frank Gore	2013	1128	9
	marshawnlynch/2495663	Marshawn Lynch	2013	1257	12
	dannywoodhead/4327	Danny Woodhead	2012	301	4

**INSIGHTS:** Certain players show an aptitude for scoring touchdowns in short-range situations, despite lower total rushing yards.

**BUSINESS VALUE:** Identifying and utilizing players with this skill can optimize a team's scoring strategy and provide a competitive edge in crucial game moments.

**QUESTION 7:** Who are the top 1% of NFL rookie players in terms of total rushing yards who debuted in the latest season?



Top 4 NFL Rookie Rushers Debuted Last Season

**INSIGHTS:** The data highlights standout rookie rushers, suggesting their high potential impact on their teams.

**BUSINESS VALUE:** Possibly enhanced team performance due to these standout rookies, which could translate into more wins and revenue. Additionally, this information could be used by teams to strategize for future drafts and by marketers to feature these players in promotions.

**QUESTION 8:** Which top 5 teams have shown a trend of improving defense over the last three seasons?

	TeamName	AvgImprovement
١	Pittsburgh Steelers	6.5
	New York Giants	5.33
	Green Bay Packers	5.33
	Oakland Raiders	3.5
	Miami Dolphins	3.33

**INSIGHTS:** Top 5 NFL teams with an improving defense over the last three seasons.

**BUSINESS VALUE:** There's potential for these teams to attract more fans and investment due to their strong performance, which can lead to increased merchandise sales, ticket sales, and enhanced branding opportunities. Moreover, this trend can inform team strategies and investment in player development or acquisitions to sustain and capitalize on the defensive success.