# Comparing the Pittsburgh Steelers under Bill Cowher vs. Mike Tomlin

STAT184 Final Project

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## Introduction

The Pittsburgh Steelers are one of the most famous franchises in NFL history, known for their iconic players, championship success, and leadership. Over the past three decades, the team has been shaped by two head coaches: Bill Cowher and Mike Tomlin.

Bill Cowher, who coached the team from 1992 to 2006, is known for his strong defensive-minded strategies, and running focused offence. Under his leadership, the Steelers reached the Super Bowl twice, winning in 2005. Following Cowher's tenure, Mike Tomlin took the reins in 2007, becoming the youngest head coach to win a Super Bowl in 2008.

In this report we will compare the Steelers' performance under Cowher and Tomlin, exploring their impact on the franchise through various metrics, including win-loss records, playoff consistency, and average offensive and defensive rankings. Additionally, we will consider how changes in the NFL's playstyle may have influenced their respective coaching tenures.

This analysis aims to answer a few critical questions about who has been the better coach, who demonstrated greater consistency, and who achieved more success during their time at the helm of the Pittsburgh Steelers?

## Methodology

This analysis compares the performance of the Pittsburgh Steelers under Bill Cowher (1992–2006) and Mike Tomlin (2007–present). The following outlines the approach taken to gather, analyze, and interpret data, as well as the methods used to account for changes in NFL playstyles over time.

Data was gathered from Pro Football Reference, and Statista, this data includes win-loss records, divisional rankings, offensive and defensive rankings, and points scored and allowed.

After the data was gathered we cleaned and merged the data sources in order to consolidate our data and make it easier to work with in the future. The data also meets the FAIR principles as it can be easily found, it is accessible and free to download, it can be easily interpreted in CSV format, and it can easily be reused.

We recognize that football is an ever evolving sport and understand how NFL rule changes can affect a teams playstyle. Over the years we have noticed the shift toward pass-heavy offenses and rule changes favoring offensive play and player safety. To address these changes, the analysis will consider and address these recent trends/changes before any type of conclusion is made.
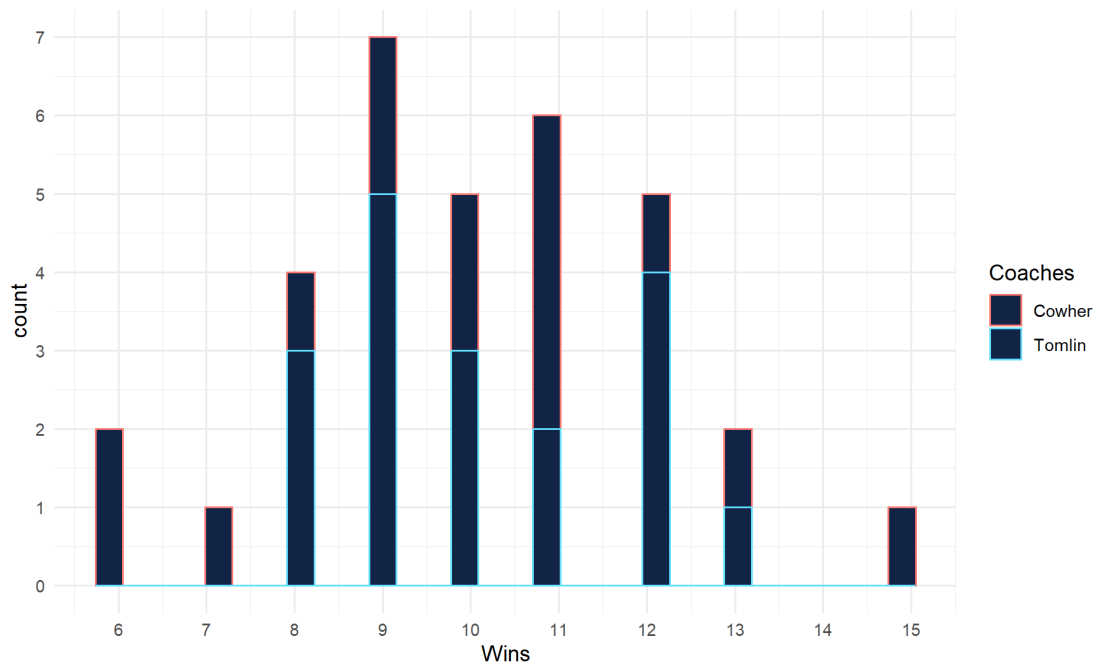
**Analysis:**

Graphical Comparisons: Include and interpret the graphs you created. Break these down by tenure, rankings, success metrics, and consistency. Evolving NFL Playstyle: Discuss trends in the league (e.g., changes in offensive/defensive styles) and their possible impact on the coaches' statistics. Discussion:

Address each research question in detail, supported by the data and insights from the graphs. Discuss any limitations in your analysis,
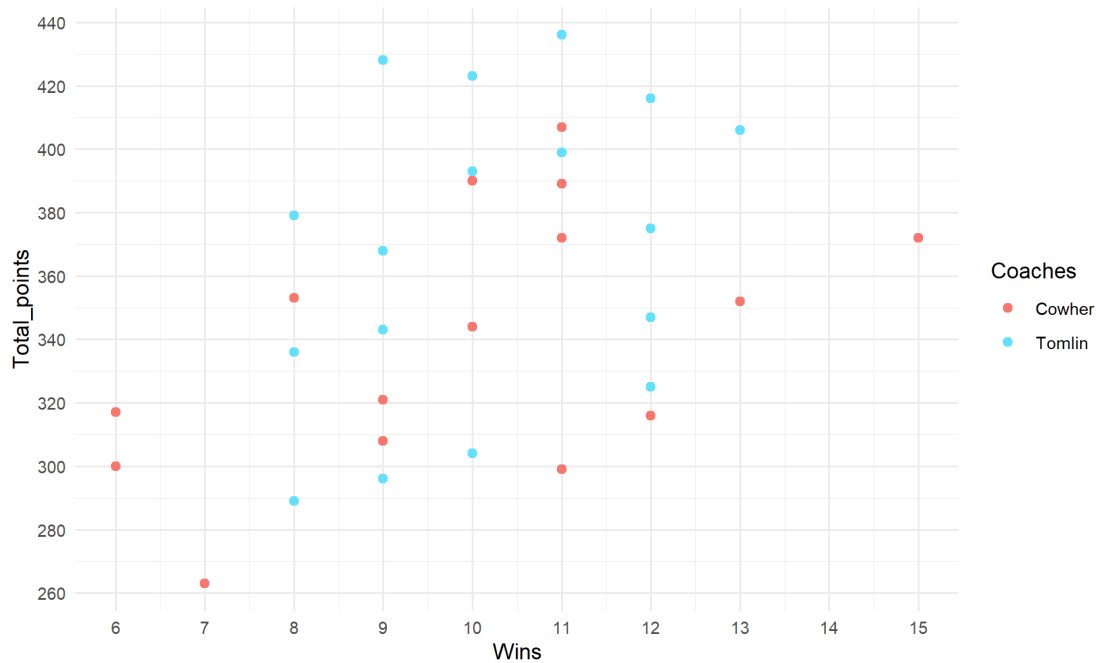
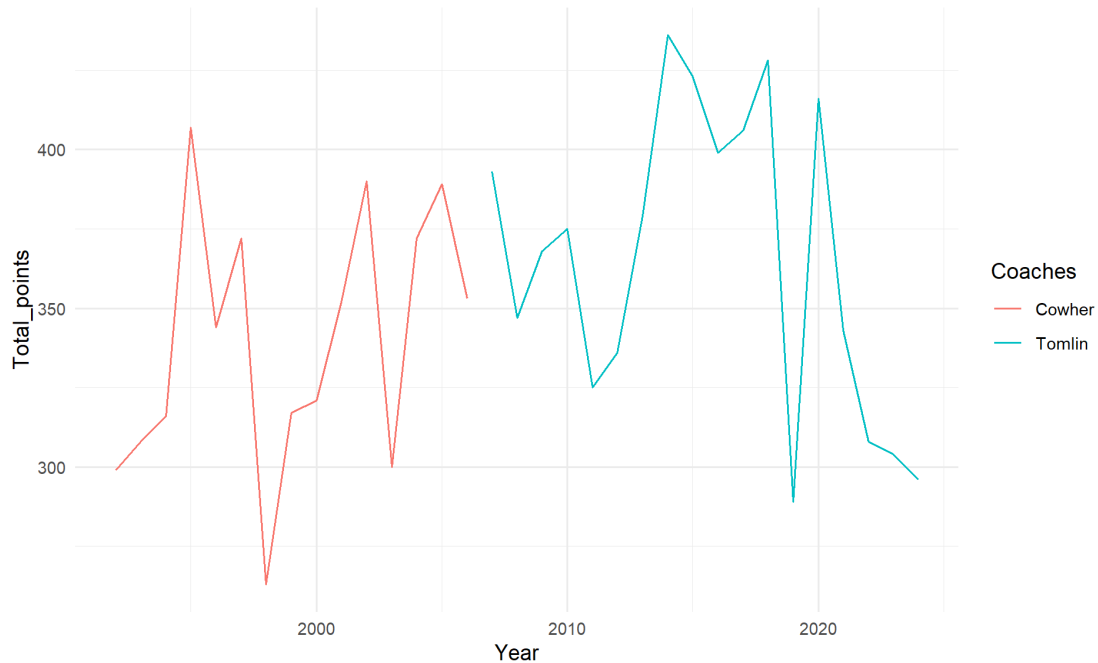- Who is the better coach for the Pittsburgh Steelers?

  This is the obvious question to ask in this analysis, but is indeed the overarching question. We will first analyze wins and losses, as it is the first thing you think of when you think of a coach.

This is a graph that shows through their time as a coach how many times Coaches Cowher and Tomlin got a certain amount of wins. These counts range from 6 to 15, with Cowher taking the lowest and highest. We see that Mike Tomlin has been very consistent from the 8 to 13 win range, but Bill Cowher has had more variety in his win columns. An important note to consider here is that When Cowher coached, there were only 16 games in the season, as opposed to Tomlin who has 17 games in each season. We interpret that Tomlin has been much more consistent with winning, but we are aware of the uneven game amounts.

The next category we analyzed was each coaches total points scored in terms of both their wins and their points scored. The graph comparing points scored to wins is on the left, and the one comparing points scored to the year is on the right.
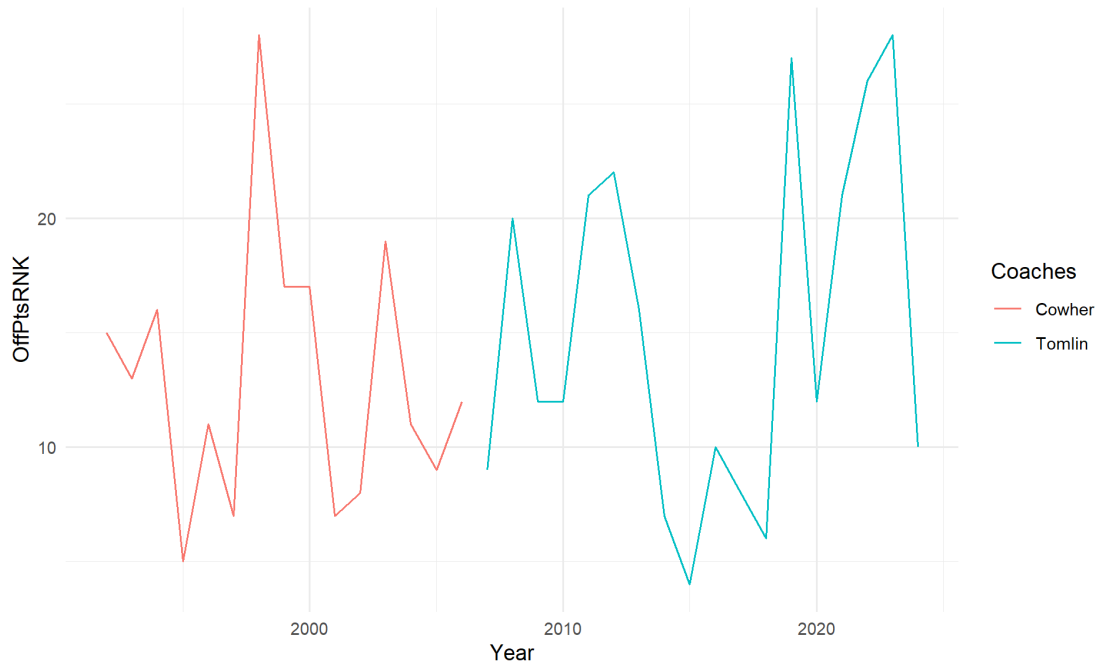
As you can see, the graph on the right once again favors Tomlin, as he is much more consistently scoring points, which by correlation is going to contribute to winning more games, as we saw in the graph above. But, a trend that has appeared in the more recent years of the NFL is that NFL football is a much higher scoring game than in years past. This is easily seen in the graph on the right, as Tomlin is easily scoring more points than Cowher, even in his seasons with less wins.

- Who is more consistent in their rankings during their tenure?

  The next thing we can look at is how these two coaches compared to their colleagues throughout their time coaching. We will analyze graphs comparing their ranks in all categories, offensive and defensive.

  The first visualization we made was comparing the offensive points scored ranking of the coaches each year they coached. In terms of ranking, number 1 is the best, so the lower the line is, the better the coach was ranked in that year.

In the graph we can see that Mike Tomlin is much more variable, having multiple spikes in rank up in the 20's, but a few short years close to 2 or 3. Coach Cowher is more consistent, only having one big spike up in the high 20's, but other than that having a consistent rank of around 8.

We then did the same for defensive points scored rank.

- **Conclusion**

Summarize your findings and provide a reasoned argument answering the main question of who was the better coach, supported by evidence.

**References**

Include all references used in report and analysis.

**Research Questions:**

- Who is the better coach for the Pittsburgh Steelers?

- Who is more consistent in their rankings during their tenure?

- Who was more successful during their tenure?

- How does the evolving NFL playstyle affect the statistics?

test

**Running Code**