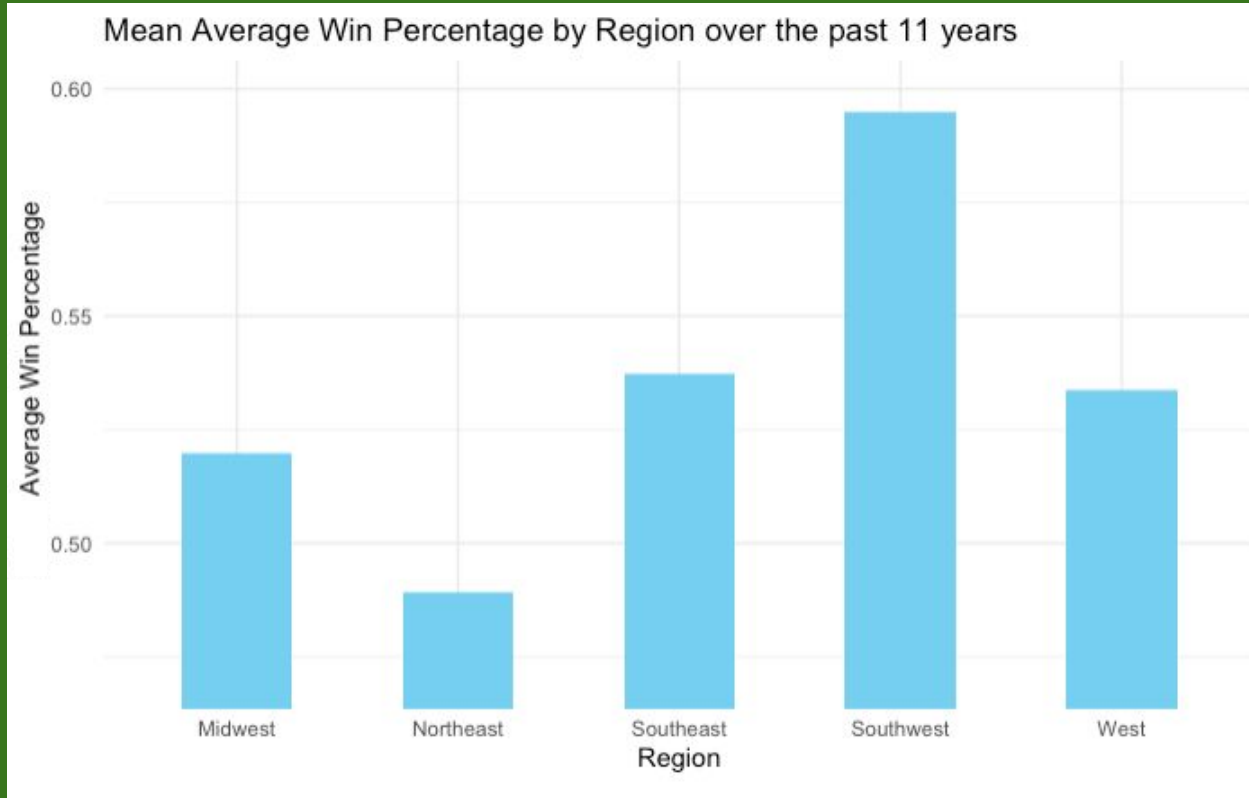# College Football Analysis

Which region has the best performing teams?

- One of the factors that affect team performance is the region. To figure out which region had the best performances hosted, we used data from the past 11 years.

- As a team plays multiple games out of which half are played on their homeground and half on an away grounds, making the home stadium being the stadium they play at most frequently, the average win percentage for those teams should give us a good estimate on how successful the teams in that region are.

- We first figured out the average win percentage of each team, then we figured out the different teams playing under different regions and calculated the average win percentages for each group. After that we took another average across all years for each group and that gave us a good idea about our answer.
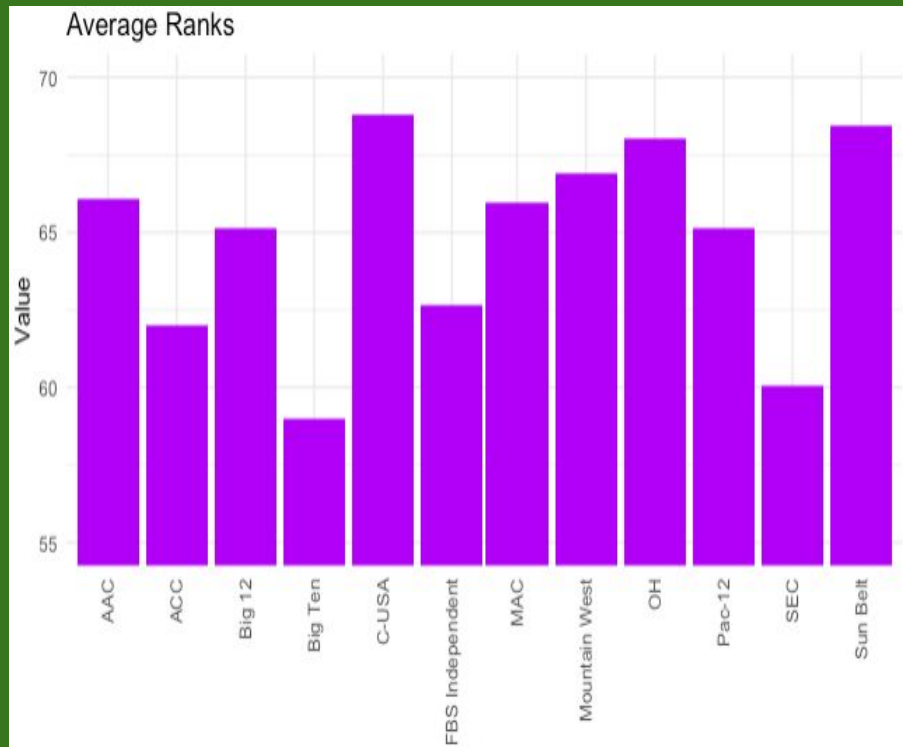
Results

Mean Average Win Percentage by Region over the past 11 years

- As you can observe here the teams of the southwest region appear to be the most successful with an average percentage of 59.4%.

- On the other hand the least successful is the northeast region with a win percentage of 48.9%.
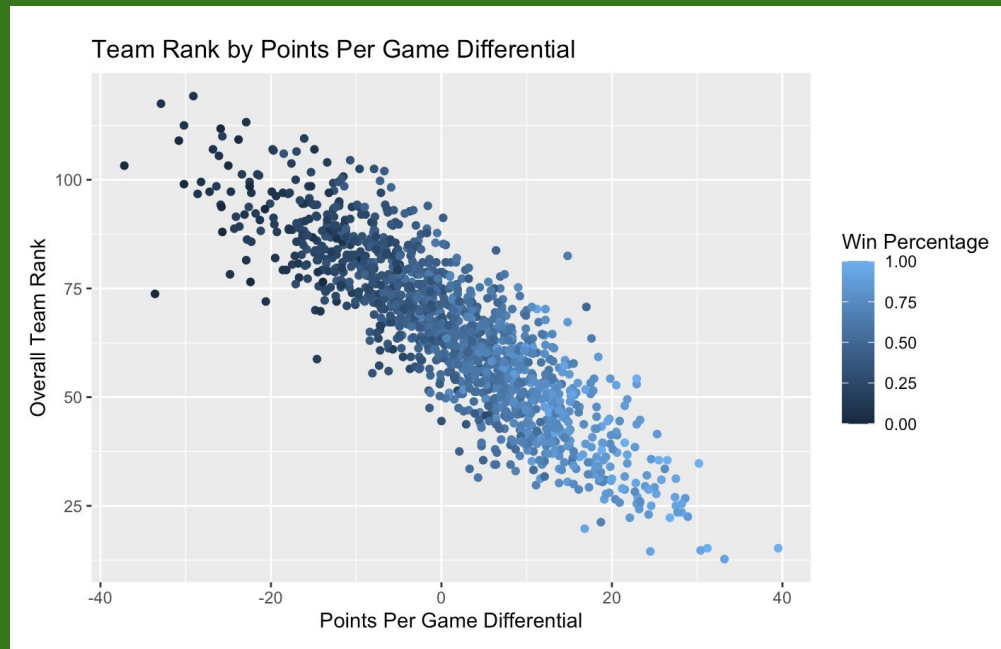
Quick sidenote: Best conferences

- We also tried to figure out the best college conference out of all the conferences there are. The best way to decide the best conference is to determine which is the most competitive, or which has the best ranked teams across different attributes.

- So using the same datasets of the past 11 years we calculated the teams' rankings by averaging 8 different attribute rankings such as offence, defence, first down, etc, following that we calculated the average of each conference and finally just took the mean across the past 11 years and got our results.

- Here we can see our results, the best conferences are Big Ten and SEC, in the first and second place respectively, having the lowest ranked teams.

Average Ranks

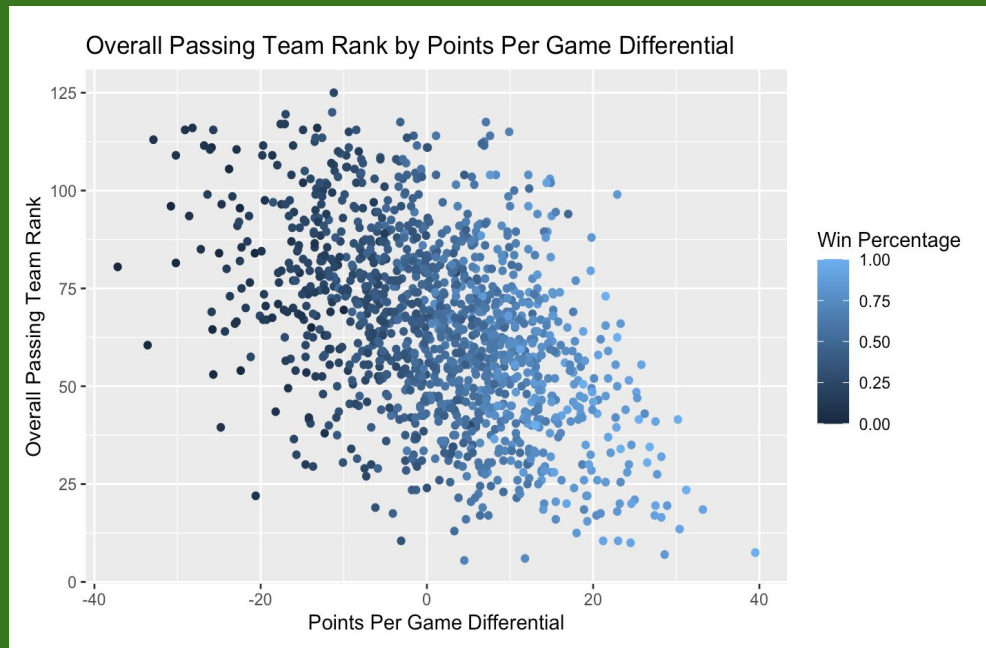# Is Passing more Important than Rushing when it comes to winning?

- **Modifying the original question**
  - Is offense and defense important to football?
- **Changing the question**
  - Which of the two types of football are more important to teams winning or losing?
- **Finding variables to use**
  - After knowing Win Percentage was going to be the color variable I needed two more to show a similar correlation.

- **Overall Team Rank**
- **Points Per Game Differential**

Is Passing more Important than Rushing when it comes to winning?

- **Overall Passing Rank**
  - Includes only Passing Offense and Passing Defense.

- **What the graph shows**
  - Correlation?
  - Any major changes from the original graph?
  - Describe what each quadrant means.

Overall Passing Team Rank by Points Per Game Differential

Is Passing more Important than Rushing when it comes to winning?

- **Overall Rushing Rank**
  - Includes only Rushing Offense and Rushing Defense.

- **What the graph shows**
  - Correlation?
  - Any major changes from the original graph?
  - Describe what each quadrant means.

- **Why is this graph a better fit?**
- **What does this mean?**