The Ebb and Flow of ACC Team Success

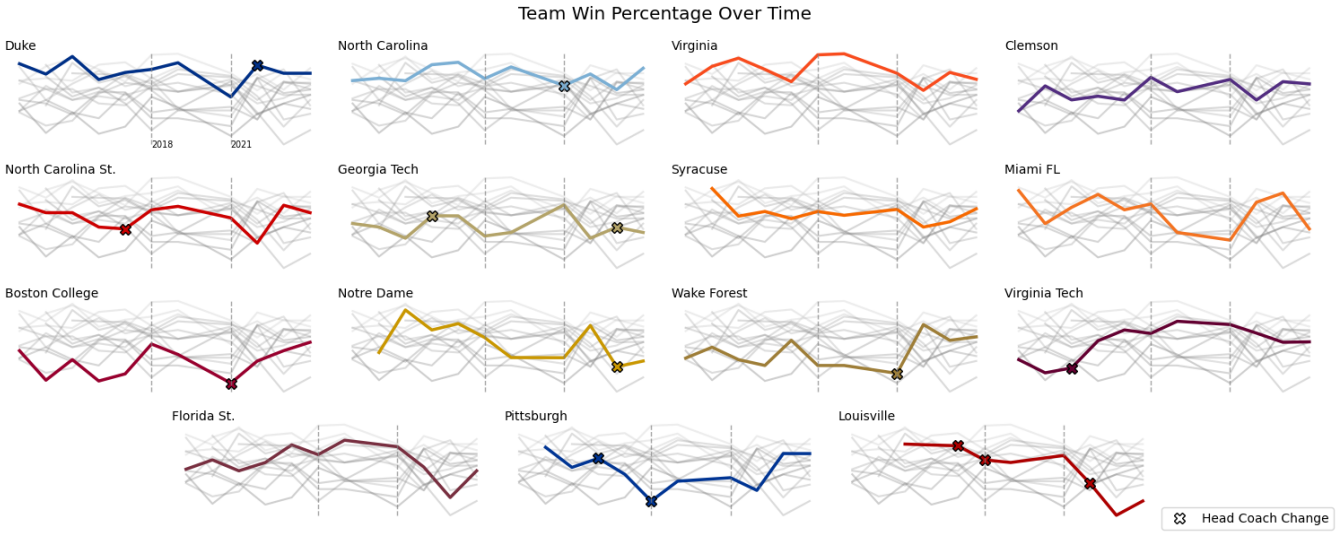

Figure 1

Figure 1 shows the win percentage trends over time of the Atlantic Coast Conference's (ACC) men's college basketball teams. Each colored line shows a team's trend while in the ACC between 2013 and 2024, with colors chosen based on school colors. The teams are ordered by their range, starting in the top left and ending bottom right. Behind each trend line are trend lines from the rest of the ACC shaded based on their mean win percentage over time. The two vertical lines correspond to key years regarding the transfer portal, a tool which facilitates the transfer of players between schools. 2018, the first line, marks the release of the transfer portal. 2021, the second line, marks policy update allowing players to play the year in which they transferred.

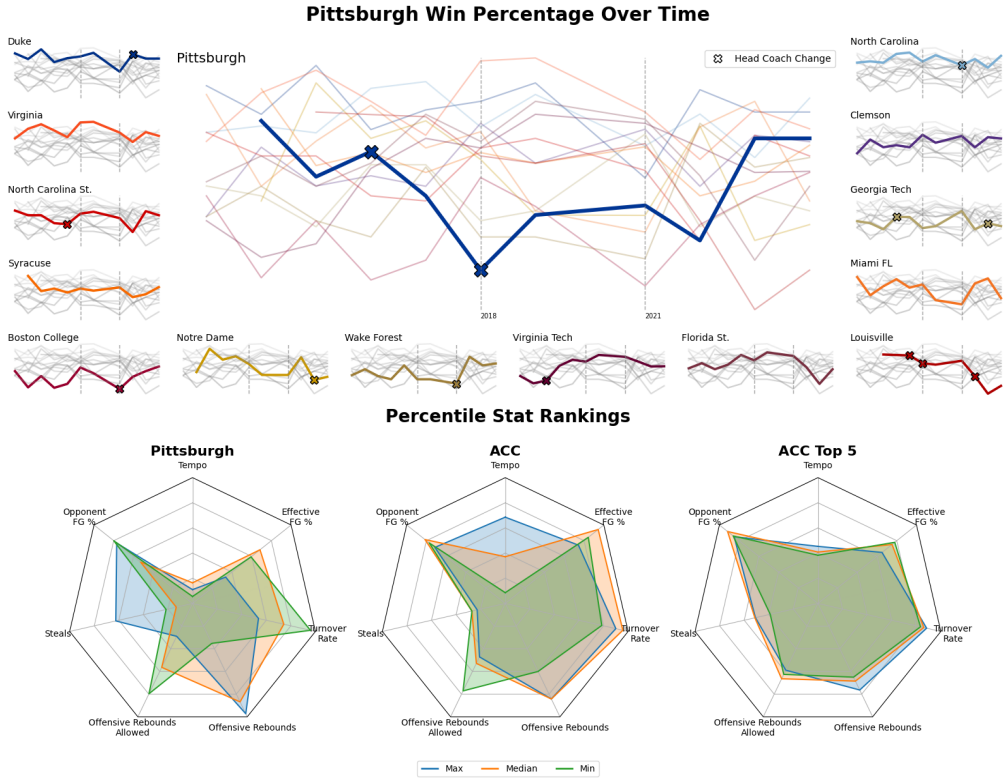

Figure 2

GitHub: https://github.com/scs128/BasketballEbbAndFlow

Figure 2 focuses on the University of Pittsburgh, showing its win percentage time series chart with radar graphs comparing the percentile rankings of aggregate stats from 2013-2024 for Pittsburgh, the ACC, and the top 5 teams in the ACC (Duke, North Carolina, Virginia, Syracuse, and Clemson as ranked by mean BARTHAG rating and aggregated by mean). Each color shape of the radar graph represents the percentile ratings of the selection's maximum, median, and minimum values for each statistic from 0 to 1. Each spoke corresponds to a separate statistic and grid lines show increments of 0.2. Opponent FG %, Turnover Rate, and Offensive Rebounds Allowed have their scales inverted to align "ideal" performance with the outside bound.

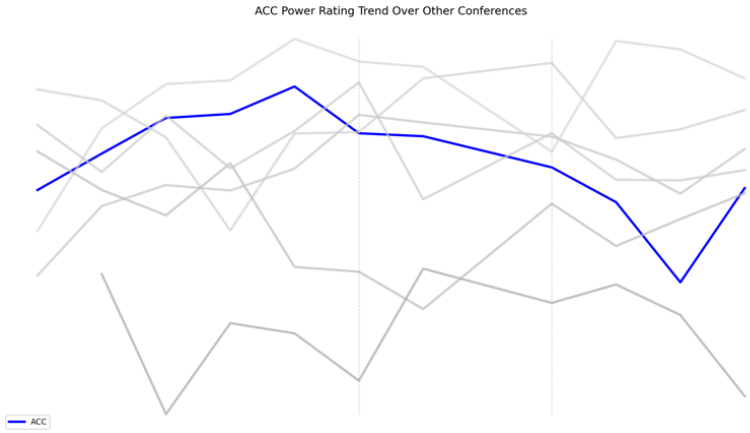

Figure 3

Findings:

- With the introduction of the transfer portal in 2018, most of the teams saw a slight downward trend figure 1. These trends are reflected in figure 3, in which the ACC had a downward trend in power rating compared to other conferences.
- After the policy change in 2021, the ACC saw a large drop in power rating compared to other conferences, a marker of instability within the ACC. Only one team has not seen a drop in win percentage in the years following the change (which could be attributed to the coaching change made that same year).
    - The fluctuation experienced may be the result of the instability this change introduced to rosters, as more players can cycle in an out of a team's active roster each year.
- Early fluctuations may not have lasting effects. Many of the teams returned to around the same win percentage before the 2021 policy update after a year or two of increased/decreased stats, such as Clemson or Virginia.
- Pittsburgh's struggles to find consistency in win percentage as it cannot find a strong floor to stand on. Figure 2 reflects this as its median ranking falls below its min and max in several statistics as their average performance falls short in comparison to other teams.
- The top teams find success through their consistency, with their aggregate combined average ranking for each statistic all remaining around the same percentile. These teams are known for their style identities, which can be attributed for their consistency.

Method:

Data comes from a Kaggle dataset of college basketball season data containing team year statistics from 2013-2024. Utilizing pandas dataframes, aggregate data for notable statistics were calculated and dataframes for teams and conferences of interest were created. These interests include power 5 conferences (ACC, Big 10, Big 12, SEC, and Pac 12), Pittsburgh, and all ACC teams. For the radar charts aggregate statistics for the seven selected stats were collected for each team in the NCAA and then ranked against each other. The Top 5 ACC team plot took each team's percentile rankings and averaged them together to be graphed.

As college sports grow as a business, finding success becomes more important for schools to be able to capitalize on this growth. Maintained success comes from a winning formula, an identity for which the program can operate within.

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