Magazine Article

In your opinion, who is the best college coach over the past century? Who can be seen as a legend? Just as there are a thousand Hamlets in a thousand people's eyes, I bet your answers are varied. In this article we will provide our best college coach name list with a mathematical model.

With always-high winning percentage in their career, splendid ability of cultivating players, and incomparable personal prestige, they are legends in the history of sports. According to our assessment system, the centennial top 5 best football college coaches are *Tom Osborne, Knute Rockne, Fielding Yost, Frank Leahy* and *Bear Bryant* sequentially. The top 5 basketball college coaches are *John Wooden, Roy Williams, Adolph Rupp, Mike Krzyzewski, Clair Bee*. And the top 5 baseball college coaches are *Cliff Gustafson, Bobby Winkles, John Barry, William Spaulding, Bibb Falk.*

As can be seen from our description above, we judge a coach's comprehensive level mainly according to the team's performance, personal prestige and the player's performance.

This might trigger a really interesting question for many sport fans: What's the difference between the public poll and our mathematical model? As a matter of fact, different aspects of emphasis lie in the problem. With the help of our model, we minimize the uncertainty and deviation arising from the subjective factors. Briefly speaking, on one hand, individuals hold different weights for the same index. On the other hand, however, our dear readers should be reminded of the fact that the ones that we are selecting today is 'best college coach all time', but not 'best college coach this time', since we are more inclined to know more about the contemporary coaches and take those forgotten but still prominent coaches for granted.

In our model, three steps are followed to lead to the final results.

Firstly, determine the evaluation index and the relevant statistical records. For example, when we are assessing the performance of the team, we are prone to evaluating based on personal preference. Nonetheless, in our model, the winning percentage, the stability of the winning percentage and the number of championships are the main concern of us. What's more, some subjective factors are also included in our evaluation system. For instance, when we are talking about the personal prestige of the coach, we base our index value on the number of personal awards and the relevant popularity. **Google trends** is utilized to render a comparative popularity index among the coaches. However, considering the fact that the older coach tends to be more difficult to be known by the public, we will compensate the statistics with professional approaches.

Secondly, our weights tend to be more scientific with our application of the mathematical method. As is known to us, when there are a large amount of indexes for evaluation, humans tend to render a less accurate judge. Thus, our method focuses on categorizing the indexes with similar attributes and therefore forms a hierarchy structure to make it more convincing. What's more,

apart from the subjective factors, some lurking information in the data itself can also compensate the model and in turn make the model more robust. The objective weights derived here, combined with the subjective weights, forms the final comprehensive weights.

Finally, combining index values and weights, it is easier to calculate the comprehensive index value of each candidate.

Our model is exactly described as above. Hope you enjoy reading it!