

2022/2023 Football Forecasting Competition Scoring

Warwick Data Science Society

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1 Prediction Accuracy

The accuracy of each scoreline prediction is determined using the equation below:

$$Accuracy = 1 - \frac{|P_H - T_H|^2 + |P_A - T_A|^2}{1 + P_H + T_H + P_A + T_A}$$

where if $Accuracy < 0$ then set $Accuracy = 0$ and:

- P_H - Predicted Home Score,
- P_A - Predicted Away Score.
- T_H - True Home Score,
- T_A - True Away Score.

The accuracy of each match prediction is then multiplied by the weighting assigned to each match by the user to obtain the points total. The accuracy calculation formula has been completely modified for this year's edition of the competition and has the following characteristics:

- predictions are penalised stronger as goal differences get bigger (e.g. Pred: 1:1 and True: 2:1 has accuracy 0.83, whereas Pred: 1:1 and True: 3:1 has accuracy 0.43),
- small differences in higher scores are rewarded more than in lower scores (e.g. Pred: 0:0 and True: 0:1 has accuracy 0.5, whereas Pred: 6:0 and True: 6:1 has accuracy 0.93),
- Accuracy is symmetric (i.e. Pred: A:B and True: C:D has the same accuracy as Pred: C:D and True: A:B for all $A, B, C, D \in \mathbf{N}$).

2 Weightings

Here comes a pinch of gambling and Premier League knowledge. Competitors choose their own prediction weightings based on their confidence that a given match prediction is accurate. Weightings need to fall within the following range:

$$2 \leq weight \leq 25$$

Total sum of weightings must be equal to 100. **Very important:** If the total sum of weightings set by the user is not exactly 100, they will not be able to submit their predictions.

3 Final score

You may also obtain 2 bonus points for each correct prediction. This brings the total for a 10-match weekend to **120 points**.

4 Term 1 match schedule

Due to disruptions in the Premier League schedule caused by the World Cup in Qatar, our forecasting competition will run this term longer than expected. That is, the deadline for the first submissions (embracing matchday 11 of 38) is set at 7pm on Friday, 14.10.2022. The last predictions are expected by 2pm on Saturday, 02.01.2023 (matchday 19 of 38). Therefore, each user is asked to make 9 submissions over the next 3 months.