1 Definition of CHRF

The general formula for the CHRF score is:

$$chrF\beta = \quad (1+\beta^2) \ \frac{chrP \cdot chrR}{\beta^2 \cdot chrP + chrR}$$

Among them, $chrP$ is the accuracy, which is the proportion of character-level n-grams that match the generated translation and the reference translation in the generated translation. $chrR$ is the recall rate, which is the proportion of character-level n-grams that match the generated translation and the reference translation in the reference translation.
β is a parameter that gives β times more importance to recall than to precision. If $\beta = 1$, recall and precision have equal importance. When $\beta = 1$, it is CHRF. When $\beta = 2$, it is CHRF2. When $\beta = 3$, it is CHRF3.

2 Advantages and disadvantages of CHRF

2.1 Advantages of CHRF

- CHRF shows good correlations with human judgments

2.2 Disadvantages of CHRF

- CHRF is so far tested on only one non-European language

References

https://www.researchgate.net/publication/281677746_chrF_character_n-gram_F-score_for_automatic_MT_evaluation