

BLEU: Avoid Cheating/Gaming the Metric

- Confirmed counts “clipped” to avoid overgeneration.
- “Brevity penalty” applied to avoid too short output:

$$BP = \begin{cases} 1 & \text{if } c > r \\ e^{1-r/c} & \text{if } c \leq r \end{cases}$$

Ref 1: The cat is on the mat .

Ref 2: There is a cat on the mat .

Candidate: The the the the the the the .

⇒ Clipping: only $\frac{3}{8}$ unigrams confirmed.

Candidate: The the .

⇒ $\frac{3}{3}$ unigrams confirmed but the output is too short.

⇒ $BP = e^{1-7/3} = 0.26$ strikes.

The candidate length c and “effective” ref. length r calculated over the whole test set.