BLEU Score

$$\text{Unigram precision} = \frac{\text{Num word matches}}{\text{Num words in generation}} = \frac{4}{5}$$

| I | have | thirty | six | years |

Machine generated translation

| I | am | thirty | six | years | old |

Human reference translations

$$\text{Unigram precision} = \frac{\text{Num word matches}}{\text{Num words in generation}} = \frac{5}{5} \quad \text{!?}$$

six	six	six	six	six

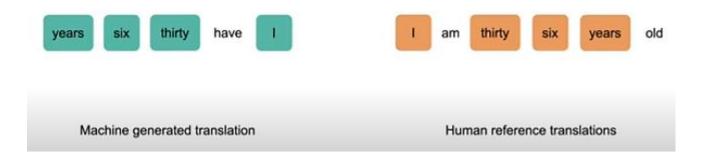I   am   thirty   **six**   years   old

Machine generated translation   Human reference translations

$$\text{Modified unigram precision} = \frac{\text{Clip(Num word matches)}}{\text{Num words in generation}} = \frac{1}{5}$$

Word ordering problem

Machine generated translation

Human reference translations

$$\text{4-gram precision} = \frac{\text{Clip(Num 4-gram matches)}}{\text{Num 4-grams in generation}} = \frac{0}{2}$$

- Does not retain the word order
- Compute precision for several order ngrams and then averages the result

Machine generated translation

Human reference translations