



ROUGE-N is one of the specific ROUGE metrics, focusing on measuring the overlap of "n-grams" between the text generated by the model (the hypothesis) and human-written reference texts (the references).

ROUGE-N calculates the degree of overlap between the n-grams in the generated text and the n-grams in the reference text(s). An n-gram is a contiguous sequence of N words. For example:

- **Unigram (N=1):** A single word (e.g., "the", "cat", "on", "table").
- **Bigram (N=2):** A sequence of two adjacent words (e.g., "the cat", "on the", "the table").
- **Trigram (N=3):** A sequence of three adjacent words (e.g., "the cat on", "cat on the", "on the table").

Text Summarization: ROUGE-N helps assess how well the generated summary retains the key phrases and ideas (n-grams) present in the original text or the reference summaries. ROUGE-1 (unigrams) measures the overlap of individual words, while ROUGE-2 (bigrams) measures the overlap of pairs of words, giving an idea of how well the model captures important short phrases.

Machine Translation: ROUGE-N is used to measure the similarity between the machine-translated output and human reference translations in terms of n-gram overlap. A higher overlap suggests that the machine translation has retained many of the phrases and structures found in the reference translations.