Kneser-Ney Smoothing

Bigram

whre

Numerator: no. of unique word types (contexts) () that follows; no. of non-zero bigrams in the column for in the bigram count table.

Denominator: no. of bigrams with count greater than 0; no. of cells in the bigram count table that have values greater than 0.

The right most term is the no. of unique word types that follow .

Trigram

Recursive Kneser-Ney Formula using continuation counts for lower-order n-grams