

# Extracting Common Motifs under the Levenshtein Measure: Theory and Experimentation

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## Abstract

Using our techniques for extracting approximate non-tandem repeats[1] on well constructed maximal models, we derive an algorithm to find common motifs of length  $P$  that occur in  $N$  sequences with at most  $D$  differences under the Edit distance metric. We compare the effectiveness of our algorithm with the more involved algorithm of Sagot[17] for Edit distance on some real sequences. Her method has not been implemented before for Edit distance but only for Hamming distance[12],[20]. Our resulting method turns out to be simpler and more efficient theoretically and also in practice for moderately large  $P$  and  $D$ .

## About this paper

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