

## A COMPUTATIONAL STUDY OF ALGORITHMS FOR CONSTRUCTION OF EVOLUTIONARY TREE

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### Abstract

In this paper we discussed an alternative method for reconstructing phylogenetic trees from evolutionary distance based method. The paper starts with some preliminary knowledge and definitions in the area, including finite directed trees and matrices. It discusses the verification of the metric property of distance matrices, and the method to find pairs of Operational Taxonomic Units (OTUs) that minimize the total branch length at each stage of clustering of OTUs starting with a starlike tree.

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Key Words : *Phylogenetic tree, Tree reconstruction, Distance-based, UPGMA, Neighbor Joining, Maximum parsimony, Genetic Algorithms.*

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