

HYBRID COFI ALGORITHM FOR DATA MINING

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ABSTRACT

Earlier, there was a need of mining algorithm for dealing with the transactional datasets. This need result into the development of a new algorithm called Association rule mining algorithm. But now a days this existing rule mining algorithm faces many problems, when it deals with the mining of hefty transactional datasets. Some of these major problems are: 1) there was a need of repetitive I/O disc scan, 2) heavy transactional datasets involves huge computations during the candidacy generation, 3) it was highly memory dependent.

This paper present the parallel implementation of our frequent item set mining algorithm, COFI, using a hybrid approach, where efficiency is achieved by applying four new techniques. 1) Mining here is done using a compact memory based data structures, 2) This algorithm generates a small independent tree which summarizes co-occurrence, 3) It uses a pruning technique which results in reducing of search space drastically & 4) It uses a simple & non recursive mining process that reduces the overall memory requirements.

KEYWORDS: Apriori Algorithm, Graphic Processing Unit (GPU), Open Computing Language (Open CP), Frequent Pattern Tree, Co Occurrence Frequent Item Trees, FP-Growth Algorithm