

Project Proposal

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For the proposal, I've come up with several ideas and haven't decided which to implement.

Idea 1: A parallelized sorting algorithm, Quick Sort or Merge Sort

The parallelized part would be when we sort two parts partitioned by the pivot in parallel. I will compare the sequential version and the parallel version with different cores.

Idea 2: A Boolean Satisfiability Solver

I will implement the resolution algorithm with parallelized version and compare it with the sequential version.

The parallelized part would be when we do resolutions, we will do it in parallel for each pair of clauses.

The algorithm takes CNF clauses and a proposition CNF clause, and it will determine whether the proposition is True or False.

Idea 3: WordLadder Paralleled Version

I will implement a paralleled BFS algorithm, divide the problem or the tree into several chunks, find the solution in each tree, and then combine them.