Università della Svizzera italiana

Efficient Computational Algorithms 2021

Final Project Report

Quicksort

Abstract

A short abstract summarising what your project is about and the main results you obtained.

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1 Introduction

1.1 The sorting problem

2 The algorithm

2.1 The partitioning problem

3 Complexity analysis

3.1 Worst-case analysis

3.2 Average-case analysis

3.3 Analysis of randomized Quicksort

4 Parallel processing

4.1 Scaling features

4.2 Parallelizing Quicksort

5 Applications to computational geometry

5.1 Finding the convex hull: Quickhull

5.2 Parallelizing Quickhull

References