Lab2

September 12, 2023

Abstract

In the present laboratory exercise, you are instructed to implement two distinct methods for **matrix multiplication**: **Strassen's algorithm** and **ordinary algorithm**. You are encouraged to undertake a comprehensive analysis of both algorithms, encompassing both theoretical frameworks and empirical validation through experimentation.

1 The Tasks

1.1 Coding

Write code for Strassen's and ordinary algorithms.

1.2 analysis

Analyze the theoretical time complexity of two algorithms, evaluate the experimental time overhead associated with the algorithm implementation, and determine their consistency with theoretical computational complexity.

1.3 Documentation

Incorporate theoretical analysis and experimental implementation into the document.

2 Points for Attention

(1) For the implementation of these algorithms, you are free to select a programming language of your choice.
(2) Kindly upload the source code files along with their associated documentation in a compressed ZIP format to the elearning system for assessment.
(3)Your document should be submitted in electronic format whenever possible. If you have a handwritten document, please ensure that the writing is neat and the layout is well-organized. The document format should be either Word, PDF, or Markdown.
(4) The deadline of this lab is 23:59:59 on Spetember 15.
(5) If you have any questions please feel free to contact teaching assistants.