

MIT2021117

Assignment 1

Answer the following in one or two lines each,

1. Your research question:

Is there any practical algorithm to compute the multiplication of two matrices in $O(n^2)$ time complexity ?

2. Thesis statement:

Theoretically, it has been proven that an algorithm for matrix multiplication of $O(n^2)$ exists. However the current state of the art implementation is of $O(n^{2.7})$. This implementation is also very complex and practically not usable. We present a new algorithm with complexity $O(n^{2.4})$ in this paper.

3. Title : A better lower bound for matrix multiplication