

Assignment 2

September 2025

1 Introduction

In this assignment, you are tasked with creating a **matrix multiplication kernel using loop tiling**. Your objective is to develop a new kernel to replace the existing one found at line 90 in the provided source code.

2 Submission Format

Your submission should consist of the following two files:

- A source code file.
- A report in PDF format.

The report should include the following details:

- Specifications of the CPU and GPU used in the experiment.
- A screenshot of the results for $N = 1024$, including the compile command employed.
- A table presenting the runtime of your GPU kernel for $N \in 128, 256, 512, 1024$.

3 Bonus

Submissions made by 23:59 on September 19 will be awarded an additional point as a bonus.