# Please No more CUDA!

## Nvidia C++ CUDA fundamentals Course Review

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# 1 Introduction to CUDA

## What is CUDA?

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It stands for Compute Unified Device Architecture.

- Closed Source – proprietary.
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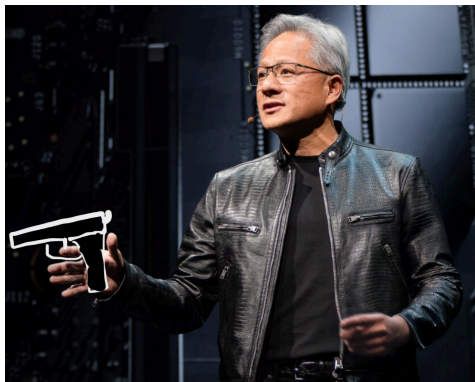- *You are insane.*

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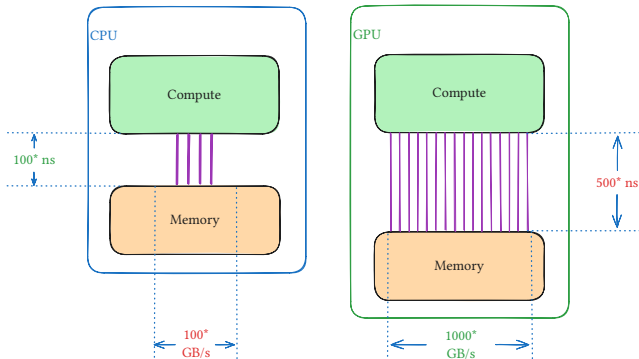
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# GPU vs CPU

A car might be quicker if you're moving four people, but a bus will probably get forty people there faster.
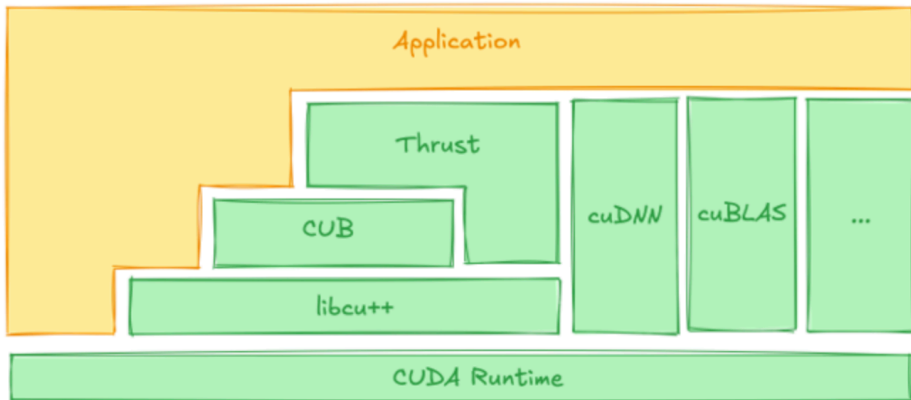


Copying a single byte is five times faster on a CPU. But when it comes to copying gigabytes of data, the GPU can do it ten times faster than the CPU

# The Software Stack

Rests upon CUDA runtime – Interface with GPU. Libraries (thrust, Cub, libcu++, cuDNN etc..) simplify programming.

# Pythonic Alternatives to CUDA

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- CuPy - Numpy-like package for Nvidia GPUs.
- PyCUDA - Direct access to the CUDA API from Python.

# My final thoughts.

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https://youtu.be/OF_5EKNX0Eg?si=3RVqLseY8SoqvlDI&t=7