

# GPU Vector Addition Performance Report

Experiment: CPU vs GPU vector addition using NumPy and CuPy

Observation: GPU acceleration does not outperform CPU for moderate vector sizes.

Reason: kernel launch overhead and host-device memory transfer dominate computation.

Conclusion: GPUs provide benefits when workload size is large enough to amortize overhead.

GPU Environment:

GPU Device: Unknown GPU

CUDA Runtime Version: 11080

CuPy Version: 13.6.0

