**Final Project Phase 1: Report**

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**Project Area:** Computer Architecture (Parallel Computing)

**Research Paper:** Parallel implementation of cryptographic algorithm: AES using OpenCL on GPUs

Link: <https://ieeexplore.ieee.org/document/8398949>

**Project Design:**

This research paper analyzes the performance gain/reduction between parallel and sequential implementations of the Advanced Encryption Standard (AES) algorithm on GPU’s. For our project we will build upon this research and further analyze the performance gain/reduction between parallel and sequential implementations of AES and Data Encryption Standard (DES) algorithms for use on CPU’s as opposed to GPU’s used in the paper. Moreover, we will be using images as opposed to plain text. Our coding language of choice is Python.