

ESE532 Project P2 Report

Ritika Gupta, Taylor Nelms, and Nishanth Shyamkumar

November 6, 2019

1 Design Space Axes

1. **Axis:** S , Number of SHA-256 hardware units

Challenge: Improving throughput of hashing step

Opportunity: Send chunks to rotating SHA unit index to allow for parallel execution

Continuum: Anywhere from 1 to however many of our hardware SHA units will fit on the FPGA

Equation for Benefit: $\text{Throughput}(S) = S * \text{singleSHAUnitThroughput}$

- 2.
- 3.
- 4.
- 5.

2 Teamwork