AFP Project 2018

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1 Different BLAS Performance

Performance Analysis of different Algebra Library C interface of Basic Linear Algebra Subroutines, Intel Math Kernel Library, Haskell (Optimized) Implementation of Basic Linear Algebra Subroutines (Level-1 functions vs different vector size) are shown in Figure 1 -8.

2 HBLAS Criterion

The performance comparison among Haskell-O0 BLAS and Haskell -O2 BLAS (using criterion library) are given from figure 11-16.

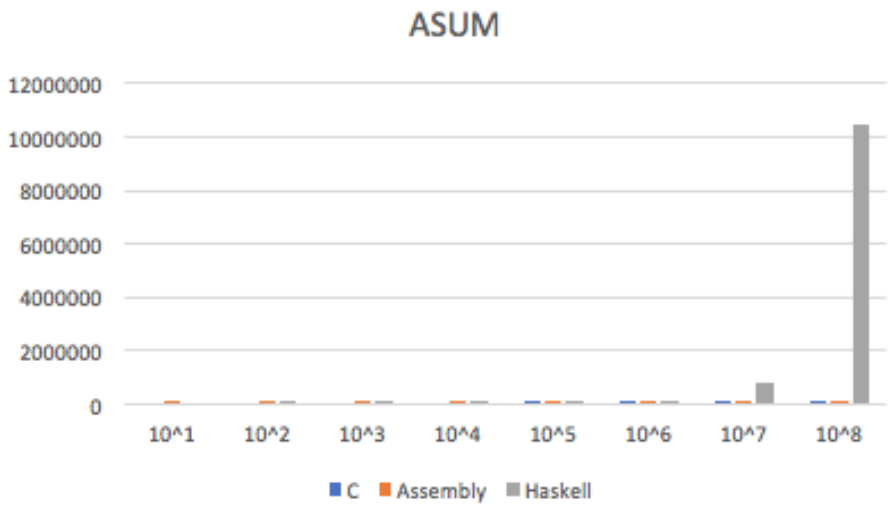


Figure 1: Relative Performance of ASUM in different BLAS: CBLAS (C), MKL (Assembly), HBLAS (Haskell-O2).

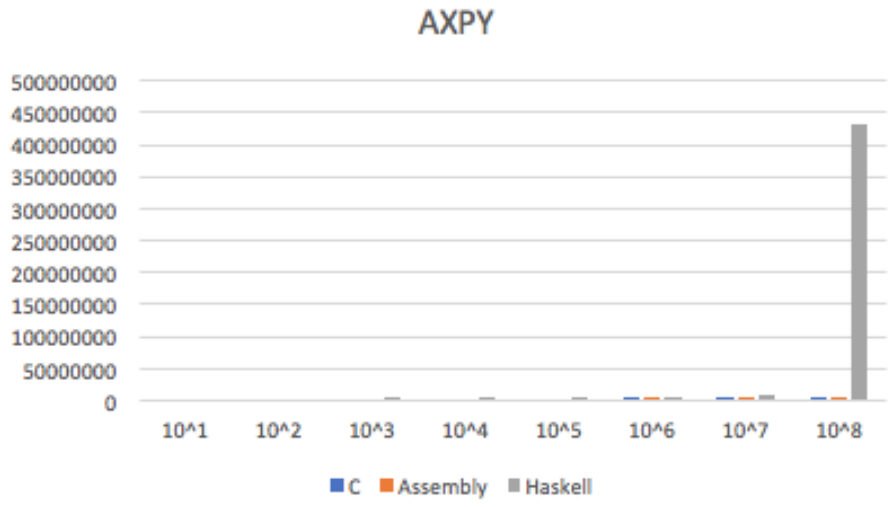


Figure 2: Relative Performance of AXPY in different BLAS: CBLAS (C), MKL (Assembly), HBLAS (Haskell-O2).

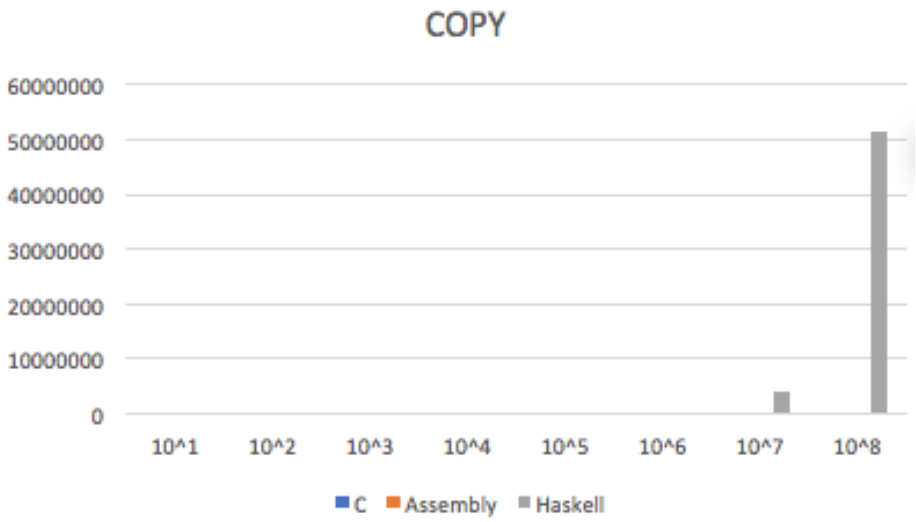


Figure 3: Relative Performance of COPY in different BLAS: CBLAS (C), MKL (Assembly), HBLAS (Haskell-O2).

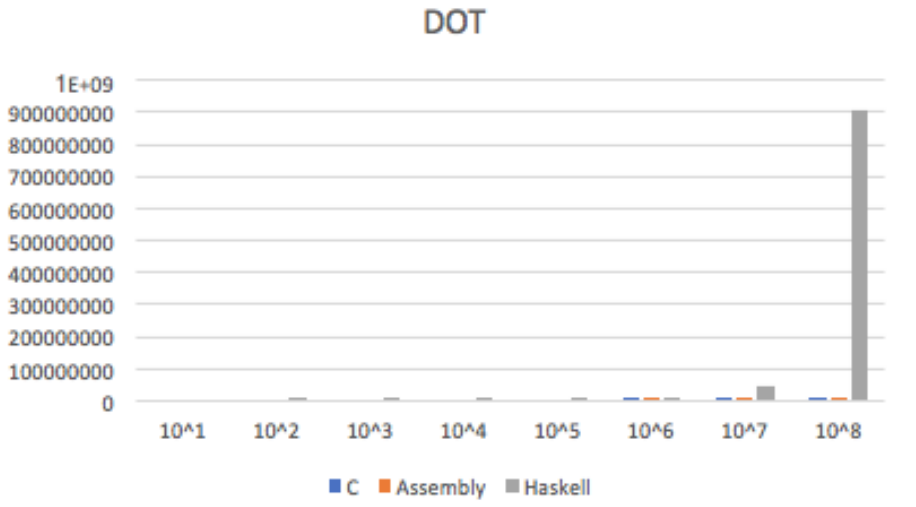
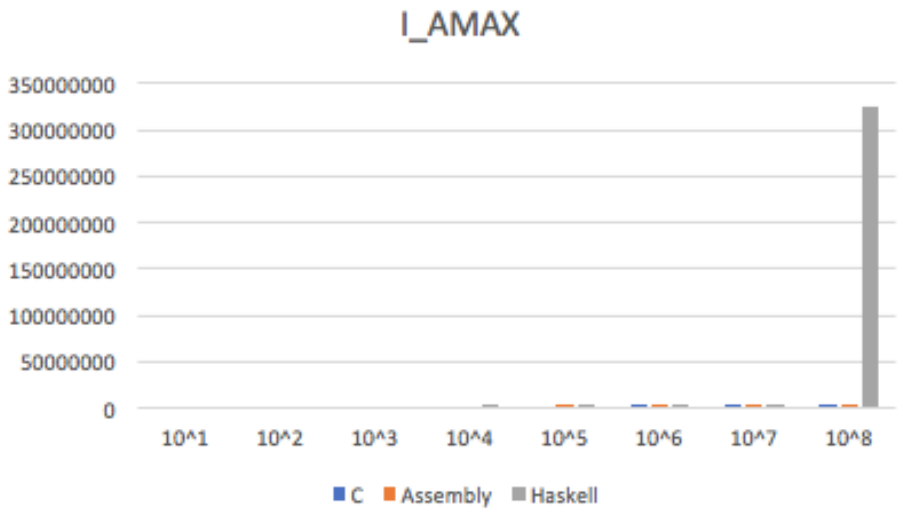


Figure 4: Relative Performance of DOT in different BLAS: CBLAS (C), MKL (Assembly), HBLAS (Haskell-O2).



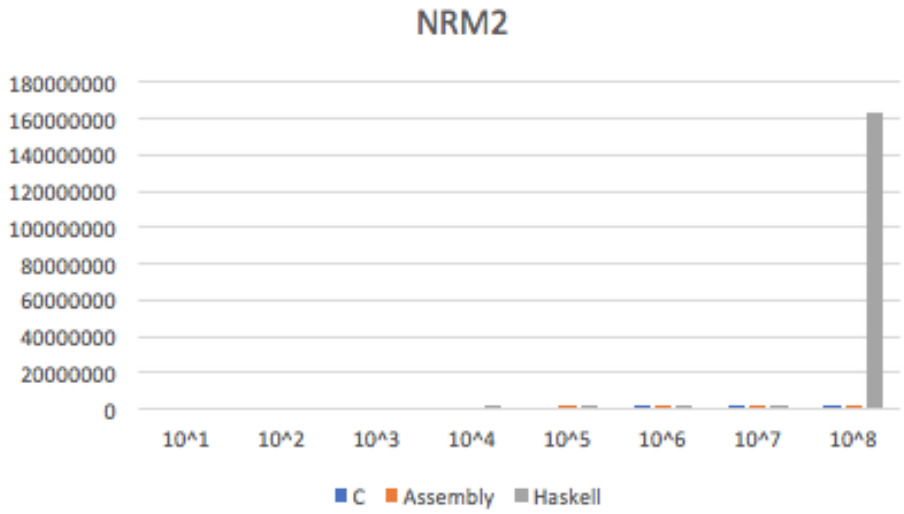


Figure 6: Relative Performance of NRM2 in different BLAS: CBLAS (C), MKL (Assembly), HBLAS (Haskell-O2).

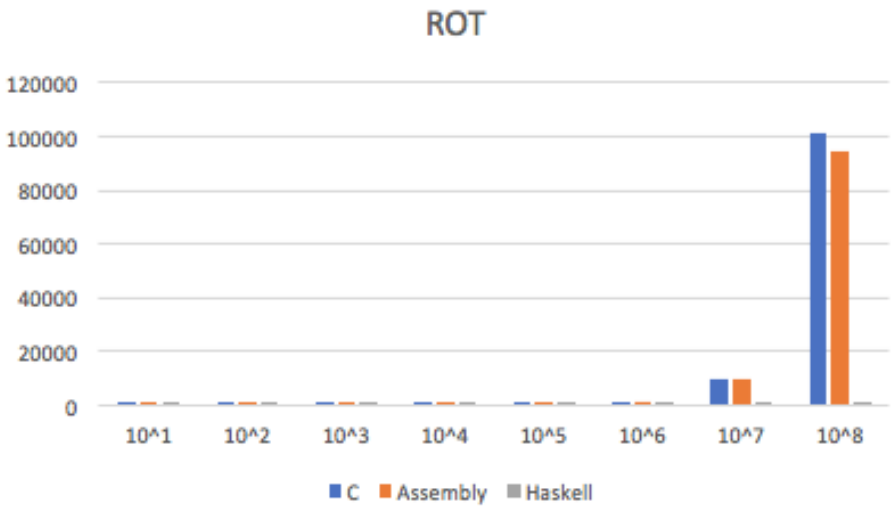


Figure 7: Relative Performance of ROT in different BLAS: CBLAS (C), MKL (Assembly), HBLAS (Haskell-O2).

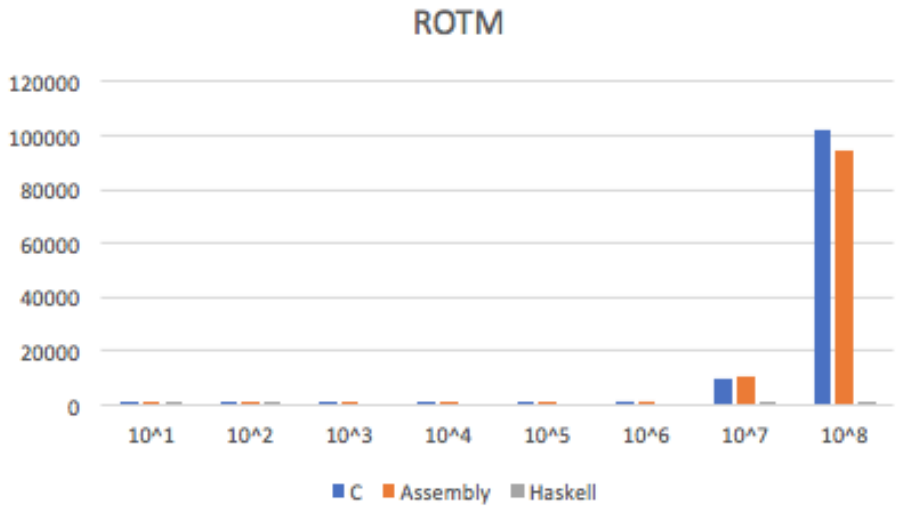


Figure 8: Relative Performance of ROTM in different BLAS: CBLAS (C), MKL (Assembly), HBLAS (Haskell-O2).

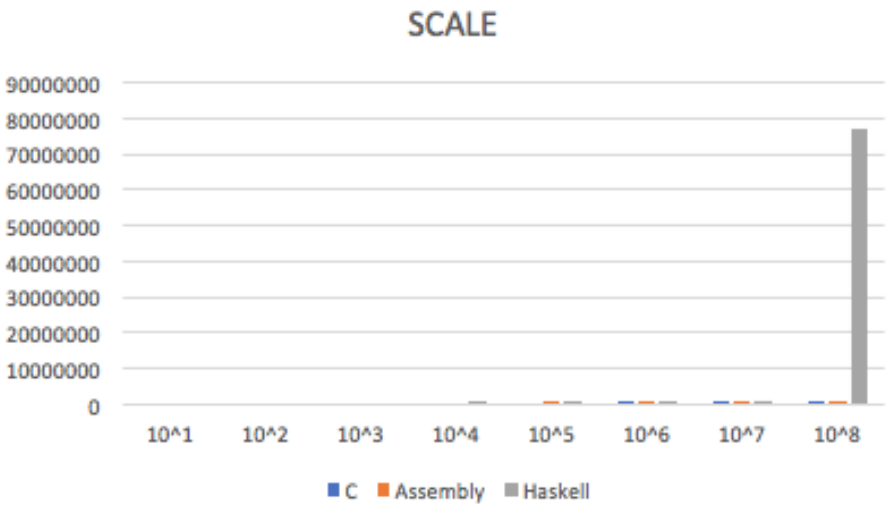


Figure 9: Relative Performance of SCALE in different BLAS: CBLAS (C), MKL (Assembly), HBLAS (Haskell-O2).

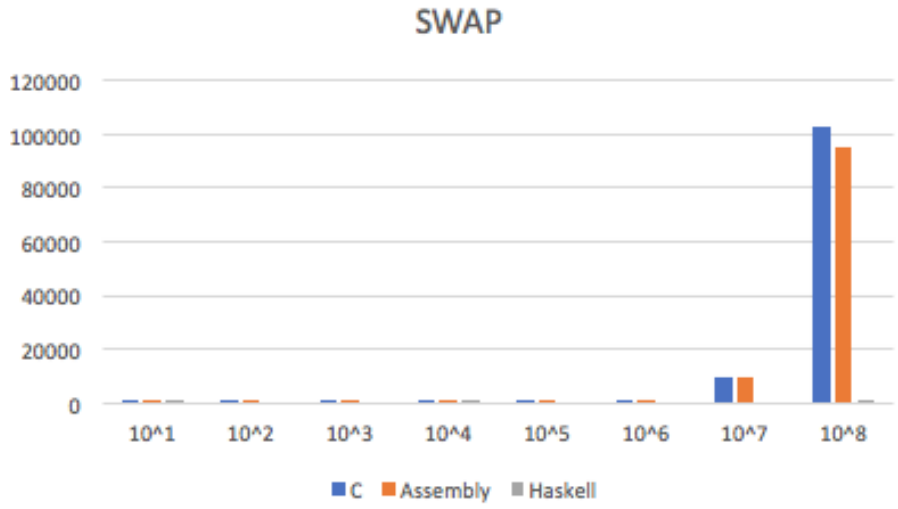


Figure 10: Relative Performance of SWAP in different BLAS: CBLAS (C), MKL (Assembly), HBLAS (Haskell-O2).

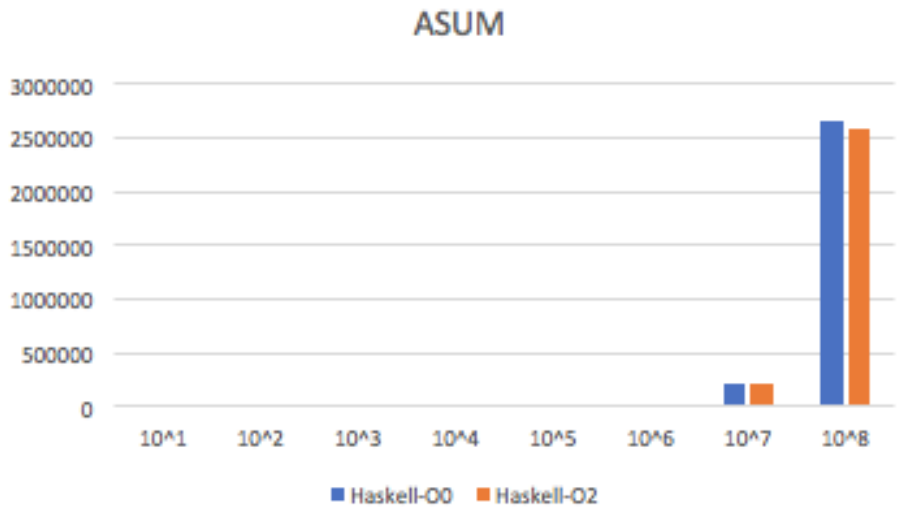


Figure 11: Performance Comparison of ASUM between Haskell -O0 and Haskell -O2.

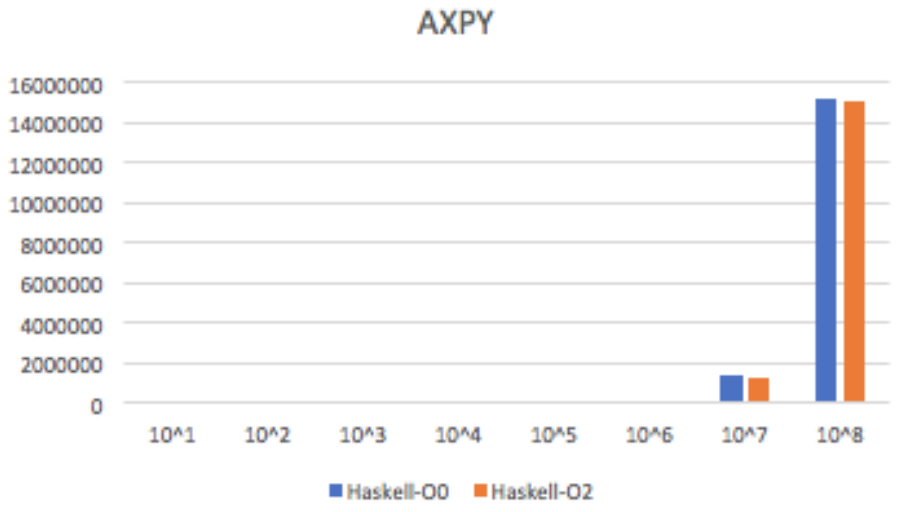


Figure 12: Performance Comparison of AXPY between Haskell -O0 and Haskell -O2.

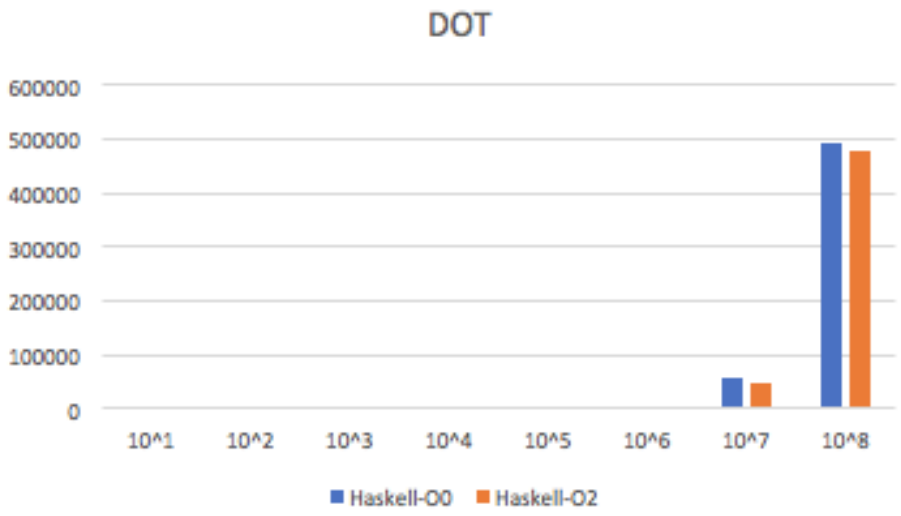
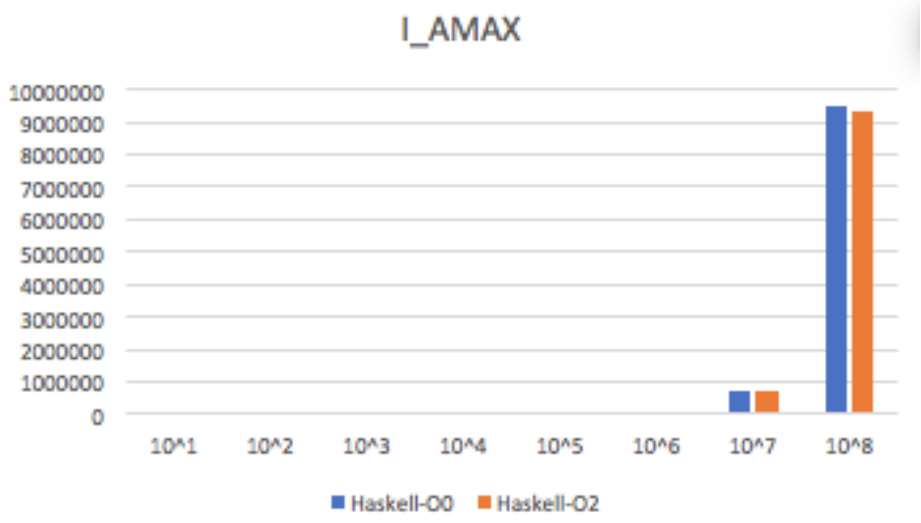


Figure 13: Performance Comparison of DOT between Haskell -O0 and Haskell -O2.



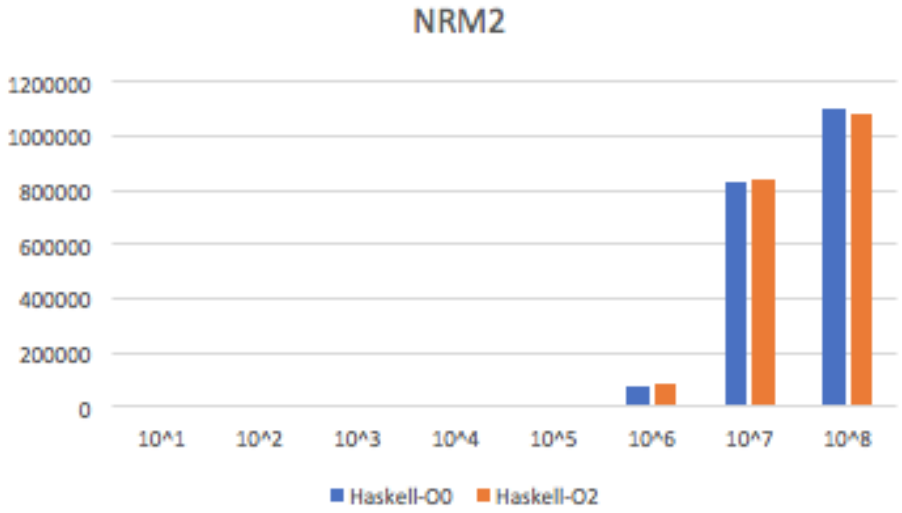


Figure 15: Performance Comparison of nrm2 between Haskell -O0 and Haskell -O2.

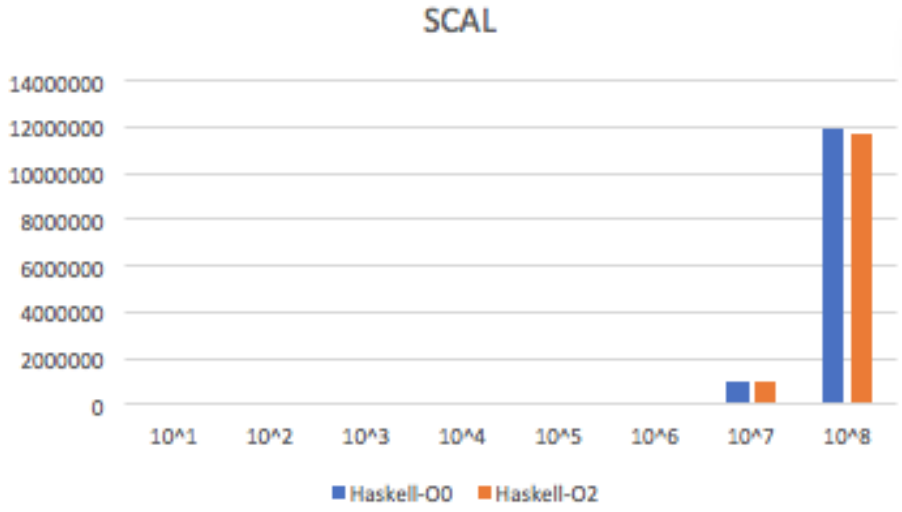


Figure 16: Performance Comparison of SCALE between Haskell -O0 and Haskell -O2.