

CISC372: Assignment 4 Extra Credit

Double => Float Performance

The runtime for all sizes of inputs is improved by around 1.5x compared to the double runtime when the doubles in the program are changed to floats. This improvement in performance time can be explained by the fact that floats are less accurate than doubles, as they are 32-bit, as compared to doubles, which are 64-bit. This means that less time will be used doing floating-point operations, and the floats take up less memory reducing memory bandwidth, which decreases the overall runtime of the parallel program.