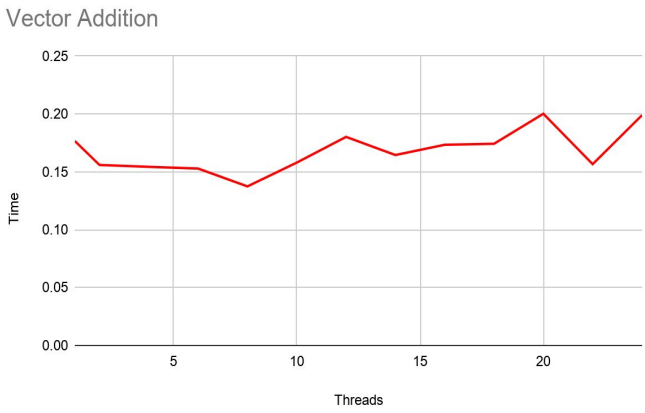
High Performance Computing

Lab-1 Report by Hrishikesh Vedantam

- OpenMP
  - Vector Addition:
    - This problem focuses on the basic addition on a large vector of double precision numbers and calculates time taken by different number of threads parallely.
    - It takes least amount of time with **8** threads
    - The parallel fraction of this operation is 1.040911431

Threads	Time
1	0.176643
2	0.155956
4	0.154354
6	0.152856
8	0.137444
10	0.158008
12	0.180222
14	0.164545
16	0.173411
18	0.174279
20	0.200215
22	0.156648
24	0.198967



  - Vector Multiplication
    - This problem focuses on the Multiplying large vectors of double precision numbers and calculates time taken by different number of threads parallely.
    - It takes least amount of time with **16** threads

- The parallel fraction of this operation is 1.018637803

Threads	Time
1	0.270943
2	0.276777
4	0.243277
6	0.233089
8	0.260294
10	0.245907
12	0.222687
14	0.235339
16	0.17458
18	0.567705
20	0.20678
22	0.17381
24	0.194702