ECE-4730 – Assignment 2

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Performance Data:

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| --- | --- | --- |
| processors | time | nxn |
| 4 | 0.174 | 200 |
| 4 | 0.263 | 400 |
| 4 | 0.471 | 600 |
| 9 | 0.228 | 300 |
| 9 | 0.364 | 600 |
| 9 | 0.735 | 900 |
| 16 | 0.664 | 400 |
| 16 | 1.049 | 800 |
| 16 | 4.167 | 1200 |
| 25 | 0.928 | 500 |
| 25 | 1.645 | 1000 |
| 25 | 3.319 | 1500 |
| 36 | 1.479 | 600 |
| 36 | 2.639 | 1200 |
| 36 | 5.251 | 1800 |
| 49 | 2.013 | 700 |
| 49 | 4.14 | 1400 |
| 49 | 14.338 | 2401 |
| 64 | 2.593 | 800 |
| 64 | 6.403 | 1600 |
| 64 | 102.12 | 4096 |

Most of the processes scale well until we get past 36 processors and then the performance gains begin to degrade.