Comparing the time taken to calculate Discrete Fourier Transform using manual method and np.fft.fft() function in python

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| --- | --- | --- |
| N | Time for manual method (s) | Time for np.fft.fft() function (s) |
| 8 | 2.8194 | 4.0283 |
| 16 | 9.1660 | 3.0110 |
| 32 | 3.5230 | 5.8267 |
| 64 | 1.3055 | 4.2243 |
| 128 | 5.8433 | 6.0574 |
| 256 | 2.1253 | 9.0652 |

Therefore, time taken for np.fft.fft() function is very low when comparing with manual DFT calculation in python

note: Running this at a different time will give different results for time

measurements, and also measurements may vary for different computer.