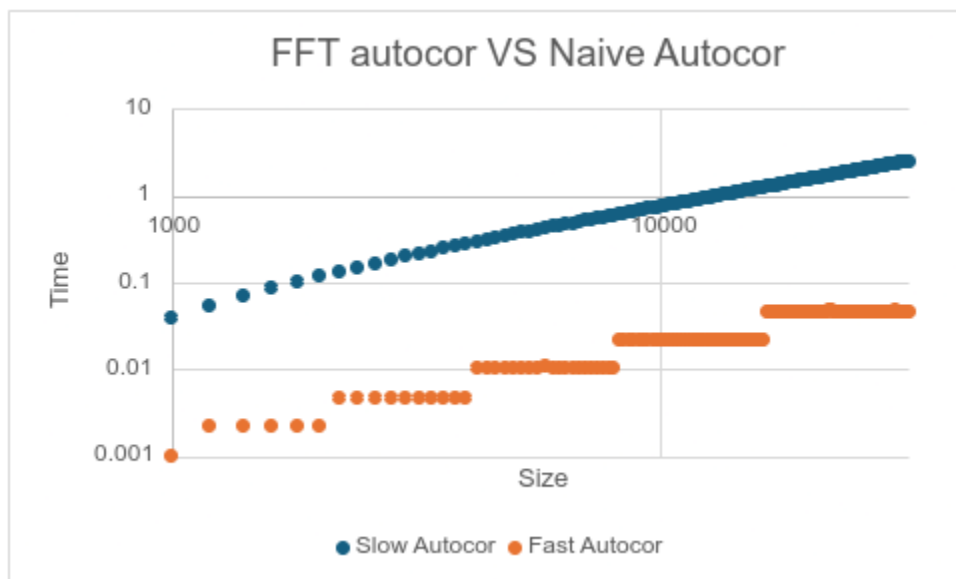


I would say this graph is unsurprising, and surprising at the same time. For one, we see that the fast mmult algorithm is overall faster than the naive method which is what we would expect. But because the fast algorithm requires matrices of size  $n^2$ , there are moments where we need to pad our matrix to a very large number, which decreases its speed compared to the Naive method. Overall the fast method is much faster, but it requires we feed our data to it in a particular way to utilize this speed up.



I would say this graph is also unsurprising. It follows a similar trend to the strassen algorithm, where the time taken with the fast algorithm increases with powers of 2. Unlike the strassen

algorithm, there was no case where the standard method was faster than the fast method. Which means that the only downside to the fast method is that it requires increased memory.