Mid Project Report

<put your name and ID>

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Part C – Analyzing the results:

Chart, line chart

Description automatically generatedChart, line chart

Description automatically generated

**Discuss the results below:**

We can observe that:

* Up until cardinality of 2 both algorithms have similar performance, but for any cardinality above that the OMP algorithm demonstrates inferior performance, not being able to recover the true support vector, thus leading to the increase in the L2-Error.
* The LP algorithm performs quiet well up until the cardinality of 12. Beyond that, the Probability of Error starts growing exponentially, which leads to the exponential growth in the L2-Error.

Hamza, pay attention that the L2-error is not normalized. When I normalize it, I get much smaller values. Check by yourself in the code, and tell me what you think.