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Homework 3

CMPT 404

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1. The pocket algorithm was rather slow when finding E­out, however the computation power seems to be lower than when using Linear regression. As each test dataset is random, sometimes it would be done in one iteration, while others it could take a couple hundred iterations.
2. The linear regression algorithm was a bit faster than the pocket algorithm when trying to find E­out. It also seems to be a bit more accurate. However, the computation power is a lot more than with the pocket algorithm. The linear regression algorithm also seemed to be more consistent, having around the same amount of iterations for each test case.
3. The Pocket algorithm starting from the linear regression solution was ultimately the fastest. It required the least amount of computational power, but the accuracy is still not the best. After running many test datasets, the majority would be finished under 40 iterations, while some could take a few hundred iterations. I had to implement a break in the code, because occasionally there would not be a valid solution, and the algorithm would run on forever. To stop this, I broke the code after the iterations became greater than 100.