1. Introduction

In this paper, we have attenpted to theorize and implement different algorithms for calculating the convex hull of a set of points.
More formally, for some n points in the plane in a set S, we have attempted to calculate the minimal set of points $C \in S$, such that all points in S either lie on the boundary or in the interrior of the convex polygon derived from all points in C.
Our all-around goal has been to create *efficient* algorithms for solving this problem, where we determine the amount of comparisons made between points as our meassurement for the *efficiency* of our algorithm. That is, our goal has been to implement a Convex Hull algorithm, which uses the feest number of comparisons. We use number of comparisons as a measurement of efficieness, asour algorithms already run in the best posible asymptotic time of $O(nlog(n))$ and the constant factors are influenced by the number of point-comparisons.
Afterwards, we compare our algorithms with each other to determine, which perform better under what scenarios and try to specify the use cases for each algorithm. This paper will describe the iterative process, including all our successes and failures, through which we have implemened our final algorithms.