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CS325: Analysis of Algorithms

Homework 4

1.

- a. MaxSet.py
- b. Time complexity: O(N) bottom up dp runs in linear time as does forming the result array.

2.

- a. PowerSet.py
- b. Time complexity:  $O(N * 2^n)$  we generate the power set with our backtracking algorithm in  $2^n$  time, but we're also copying over list to our answer array which is an O(N) operation.