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Submission for Project 3
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Scatterplots:

Questions:

I. Is there a noticeable difference in the performance of the two algorithms?

Yes the exhaustive approach took 0.05050015449523926 seconds longer than the dynamic approach.

II. According to your experimental observation, which of the implementation is faster, and by how much?

The dynamic programming approach implementation is faster by ~0.0505 seconds.

III. Are your empirical analyses consistent with the predicted big-O efficiency class for each algorithm? Justify your answer.

Yes the analyses are consistent with the predicted big Os because the dynamic approach takes $O(n^2)$ time which is faster than $O(n * 2^n)$, which was shown in my program.

IV. Is this evidence consistent or inconsistent with hypothesis 1? Justify your answer.

The evidence is consistent with hypothesis 1 because the exhaustive approach did produce correct output.

V. Is this evidence consistent or inconsistent with hypothesis 2? Justify your answer.

The evidence is consistent with hypothesis 2 because the exhaustive approach took longer which coincides with its worse time complexity of big $O(n * 2^n)$