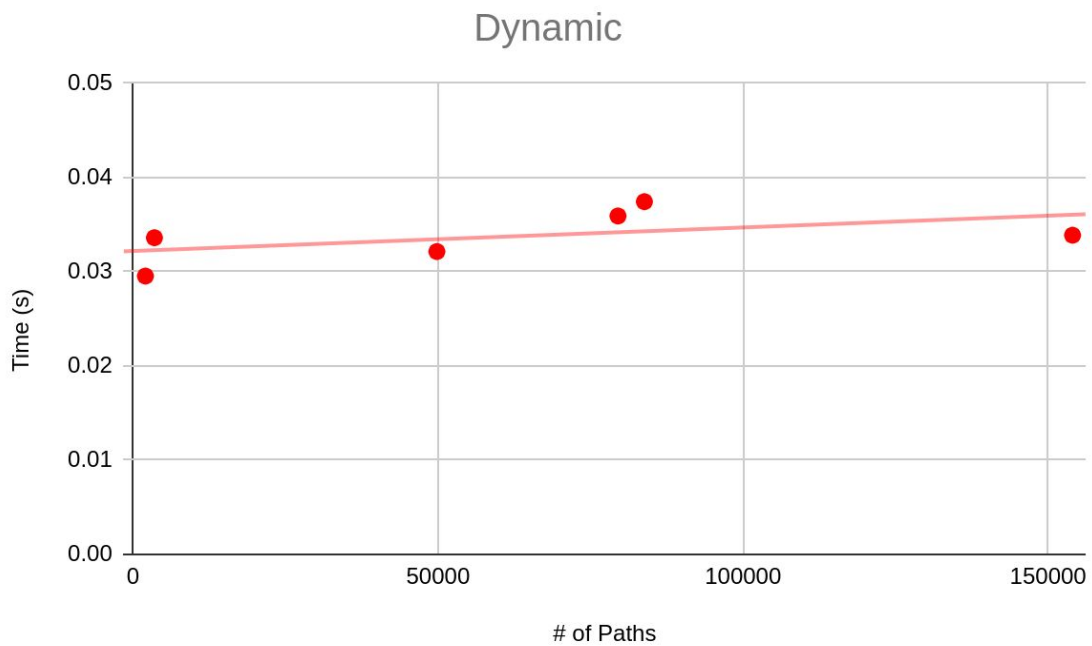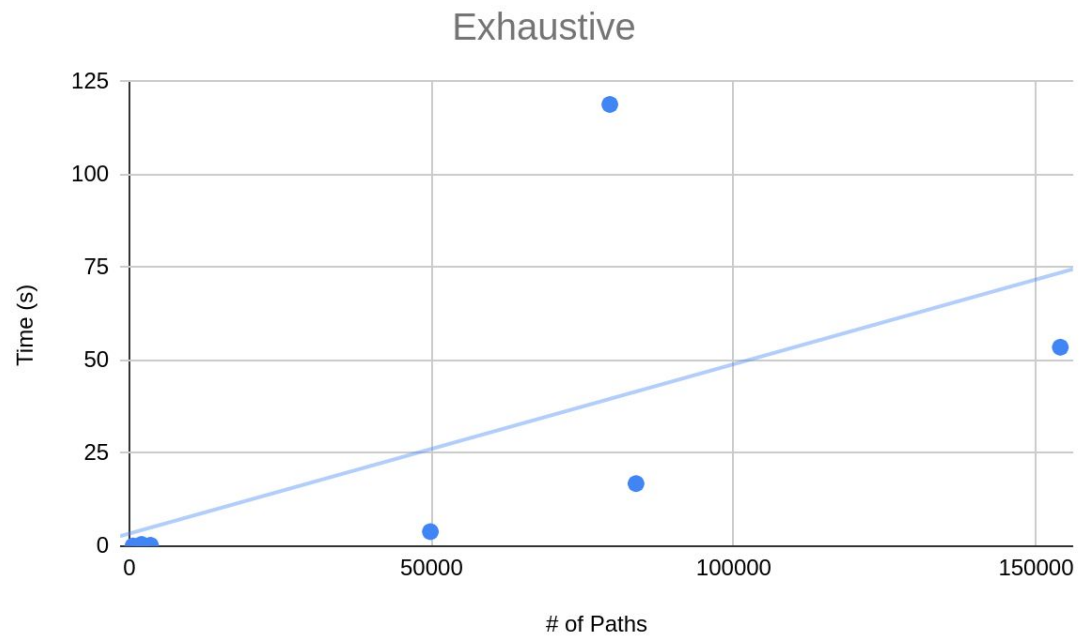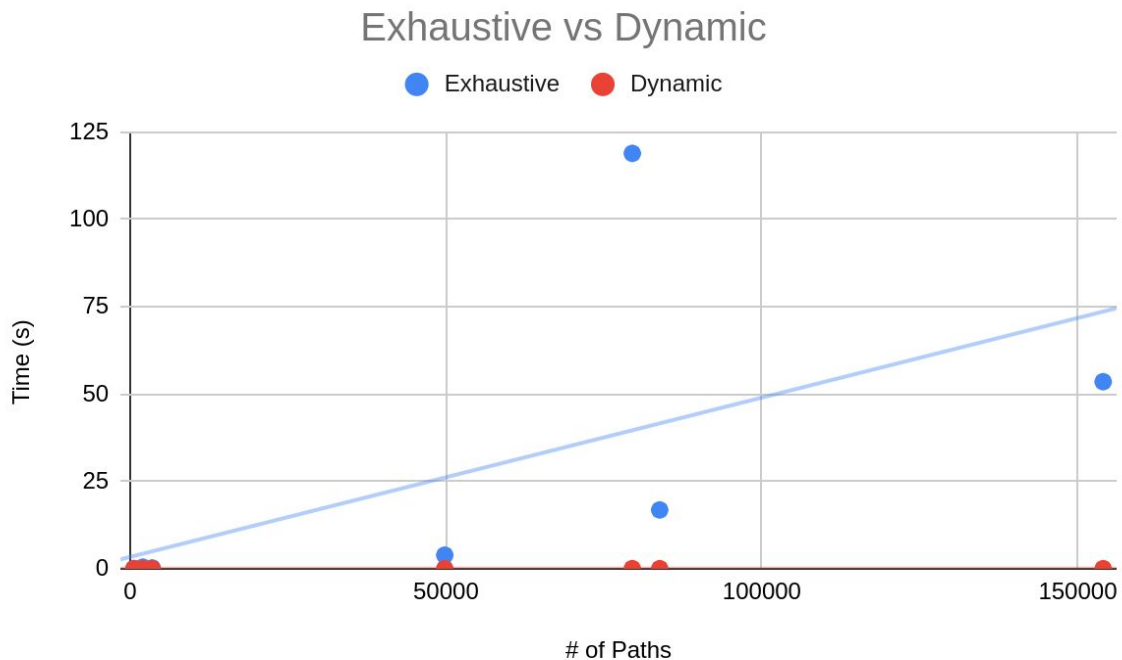Tommy Huynh Tommyh@csu.fullerton.edu
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Cpsc 335
May 7,2020

Project 4: Iceberg Avoidance

Exhaustive

Dynamic

Exhaustive vs Dynamic

● Exhaustive   ● Dynamic

1. **Are the fit lines on your scatter plots consistent with these efficiency classes? Justify your answer.**
   a. The fit lines are consistent with the efficiency classes. With exhaustive for example, the line has a steep slope to it meaning that the data is exponentially increasing in time.

2. **Is this evidence consistent or inconsistent with the hypothesis stated on the first page? Justify your answer.**
   a. Yes, the data agrees with the hypothesis.
      i. Since the dynamic approach is much more efficient when dealing with problems having almost consistent times when looking for the most optimal route to avoid the icebergs. The efficiency of this approach is very consistent overall
      ii. Where the exhaustive search data essentially tries all possible attempts in avoiding icebergs which adds up the amount of time it takes to solve the problem

3. **Compare and contrast the difficulty you found in implementing the two algorithms. What was the most challenging part of implementing each algorithm. Overall, which implementation did you find harder, and why? Which algorithm implementation do you prefer?**
   a. The most challenging part of implementation in the exhaustive algorithm is understanding the path class. The most challenging part of implementation in the

dynamic algorithm is spending time to understand how the algorithm works. Overall, I found that the dynamic algorithm is harder because we spent a lot of time understanding the algorithm. I would prefer exhaustive since it's easier to implement despite the time efficiency.