Amazon Delivery Truck Simulation

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Abstract

Summary of whole paper.

1 Introduction

Introduce the context and the problem here.

2 Methodology

Talk about how we're solving the problem (C++, TACC super computer) and how the program works (e.g. reads in text file, spits out text file). Then go into the development process (start simple with address/list classes, test functionality then expand it a bit)

3 Results

Pretty pictures go here. Describe each situation being displayed and talk about what they mean, e.g. is it the optimal solution? Good enough? Is there a tradeoff between time to execute and quality of results?

Hmm, maybe insert a table comparing number of nodes/trucks to program execution time. What rate does it increase at ($O(n), O(n^2), \&c.$)

3.1 Simple Single-Truck Case

3.2 Difficult Single-Truck Case

4 Conclusion

Talk about what we learned, how this all applies to industry, ideas to scale the problem up, &c.

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Figure 1: An unsorted route optimized through the greedy method (blue) and the opt2 method(green). This demonstrates how the opt2 method alone is not necessarily sufficient to find the fastest route.