Progress Report #4 (4/19/2024) -

This week was a little less in progress than last week but I still believe that I can complete the project on time. First this week I completed the empirical analysis on the two Rubik's Cube algorithms. I made small edits like shortening the analysis into less sections so there is less redundancy in my analysis. I completed the results, discussion and conclusion sections and they turned out nice. The full analysis is available under the file analysis.pdf. Additionally, I decided on what I would like to do for the second half of the project with the METAL data. I have slightly altered what I would like to do. I decided I am going to use Dijkstra's algorithm to find the shortest path from vertex to vertex by using only roads that have sidewalks. There are a few ways I am going to attempt to simulate sidewalk data. First I will check when vertices are close together (within a mile) that means that those edges have sidewalks. Then I will be choosing vertices on a map to see what the shortest path is, only using those vertices and edges to get there. In a lot of cases there may not be solutions. I will also test other methods if that doesn't seem to work. I have added in the code to the repository for Dijkstra's algorithm and everything else for the METAL data. Next week I will be modifying this code to simulate the sidewalk data, then I will be choosing specific maps for METAL to find solutions for. Then I will complete the video presentation as well next week. After that I will refine everything I would like to on all parts of the project and also complete the write up for this project.