

## Dev Log

### Week 1:

The first week we decided on our goals of using the Open Flight's Route Dataset and running the following algorithms of a BFS traversal, Dijkstra's algorithm and a visualization of a force directed graph. In terms of code, we created the graph template and both Airport and Routes classes. We had also attempted to finish the build of our graph data structure and parse through the data setting the necessary values like airport ID, longitude, and latitude. For the next week we will split up who is working on which algorithms and start the implementation. We also will finish finalizing our graph constructor that parses through the data so that the data is ready to use.

### Week 2:

Dom and Dennis finalized our graph constructor by fixing parsing bugs and errors. As a group we updated our project goals from using Dijkstra's algorithm and a force directed graph to using Kruskal's algorithm and an output to a world map based on latitude and longitude. We also divided up and organized how we would go about working on the remaining objectives, particularly in a way to avoid merge conflicts. Ben and Preston created a BFS folder and began working on the algorithm. They also imported all necessary CS 225 files, including PNG, Catch, and the animation files from MP Traversals. By next week we will attempt to have BFS and Kruskal's algorithm implemented and have it displayed on a world map.

### Week 3:

In the final week, we were able to finish everything on time. We first updated our goals one final time to choose the astar algorithm as our third complex algorithm. Then, Preston and Ben wrote both BFS and astar with given testing to make sure that the algorithms were working as expected. We also finished up the main file so that the user can specify what algorithms they want to run by specifying it as parameters when running our program. Dom and Dennis wrote Dijkstra's algorithm and wrote the necessary testing to ensure that their program was working as expected as well. After we had all three algorithms working and all of the features working we put together the final paper and video presentation to show off what we have done.