CS 225 Project Goals

Dataset: We choose OpenFlights as our dataset for this final project. OpenFlights is an open source data set of flight routes and airports. The data is currently dated from 2014. We are able to load the data on airports, train stations and ferry terminals, including user contributions, and treat them as a directed graph. The link to the dataset is: https://openflights.org/data.html , and its format is CSV file.

Traversal: BFS. We choose BFS because it is better for a single source shortest path between two nodes, which suits our project goal.

Shortest Path: Dijkstra's Algorithm. To find the preferred routes, we will use Dijkstra's Algorithm as our shortest path algorithm. For instance, given a node, Dijkstra's Algorithm will find the shortest path between all other nodes in the graph.

Complex or Uncovered Algorithm: We chose A* Search to traverse our data structure.The algorithm efficiently plots a walkable path between multiple nodes, or points, on the graph. A* is an extension of Dijkstra's algorithm with some characteristics of breadth-first search (BFS).

Option: Shortest Path algorithm to find preferred routes. We might end up making the Graphical output projected onto a world map, but it depends on our actual progress for the analysis.