Project Goals

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We plan to use the OpenFlights datasets on airport and route information for our project, obtained from https://openflights.org/data.html. Below we have listed the specific algorithms we plan to implement and potential ideas for additional features if time permits.

Dataset
- Airport and Routes dataset from OpenFlights
- OpenFlights: https://openflights.org/data.html
- For weights of the edges, use either physical distance or number of routes.

Traversals
- DFS
- BFS

Covered Algorithms
- Dijkstra's Algorithm
    - The algorithm can be used to find the shortest route between any two airports.
- Dijkstra's reference: https://en.wikipedia.org/wiki/Dijkstra%27s_algorithm

Complex/Uncovered
- Landmark Path
    - The algorithm can be used to find the shortest route between a and b through point c
        - Find shortest path between ac and bc, and connect those two
- If we have time:
    - Graphical Output
        - A visualization of the flight connections across the globe. The density of edges indicates the level of traffic, and important airport nodes.
    - Strongly connected components:

- This algorithm can be used to find a subset of airports such that there is a way to get from one airport to any other airporthttps://en.wikipedia.org/wiki/Kosaraju%27s_algorithm