**Software Engineering I**

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**Data Driven Decision Aid**

**User Manual**

**Mission Solutions Engineering**



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**Introduction**

This is the official user manual for the Data-Driven Decision Aid developed for Mission Solutions Engineering. The Data-Driven Decision Aid has been developed around the specifications of the user. This program allows the user to enter the latitude and longitude for a start and end location. It then finds the safest, shortest, and/or fastest route between the two locations, depending on option(s) selected by the user. In determining these routes, facts stored about previous events and road properties are considered.

**I. User Options**

The user has the options of determining the safest route, fastest route, and/or most direct route between two locations. The safest route is determined based on events that have taken place along it. The fastest route is determined by the road speed along the route. The most direct route is determined by the distance of each route segment. The user is also required to enter the longitude and latitude of the start location and the end location. If an invalid coordinate is entered the user will be prompted to re-enter the coordinate.

**II. Run Program**

After the user opens the program, he/she enters the longitude and latitude of the start and end locations and determines which path he/she wants to find.

a. Safest Route

- To find the safest route,

1. Enter the longitude and latitude for the start and end points.

2. Check the “Safest” box

3. Click “Submit.”

b. Shortest Route

- To find the shortest route,

1. Enter the longitude and latitude for the start and end points.

2. Check the “Shortest” box

3. Click “Submit.”

c. Fastest Route

- To find the fastest route,

1. Enter the longitude and latitude for the start and end points.

2. Check the “Fastest” box

3. Click “Submit.”

d. Combination Route

- To find any combination of the above criteria,

1. Enter the longitude and latitude for the start and end points.

2. Check any of the route boxes

3. Click “Submit.”

**III. Interpret Results**

After the user clicks “Submit”, a graph of the area the route passes through will be displayed on the screen. There will be three routes displayed on the graph, each denoted by a color. The green route will be the best route based on the option(s) the user selected. The yellow route will be the second best route based on the chosen option(s), and the red route will be the third best route based on the chosen option(s).