

Ben Utter

Professor Forouraghi

Artificial Intelligence

07 May 2024

### AI Final Report

Graphical User Interface (GUI): The program offers a user-friendly interface which users may input delivery locations and see a graphical display of optimized delivery routes.

Input Management: Using a straightforward form in the GUI, users can enter the start position and several destination positions.

Priority Assignment: Using predetermined standards, priority values are allocated to every delivery site. Delivery agents visit delivery sites in the order determined by the priority values.

Route Optimization: To determine the quickest and most effective paths from the start place to each destination, the system uses Dijkstra's algorithm.

Visualization: A matrix display in the GUI provides a visual representation of the optimized routes. The routes traveled by the agent to get to each location are visible to users.

Error handling: To guarantee dependability, the program uses error handling techniques. When user input is considered invalid, it verifies the information entered by the user and displays relevant error messages.

**Member 1: Ben Utter**

I believe I handled **70%** of the overall project. My specific tasks included:

Task 1: Coding Dijkstra's algorithm

Task 2: Creating the popups for user inputs and for errors

Task 3: Created the priority queue

Task 4: Created the visual display of the matrix

Task 5: Connected everything together and intricately tested

...

**Member 2: Kenyatta Collins**

My teammate believes that I handled **30%** of the overall project. My specific tasks included:

Task 1: Editing the matrix to best fix different zones and priorities