

# PhotoStorming

A Map for Landscape Photographers

Team 61  
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# Outline



## Where we are Now

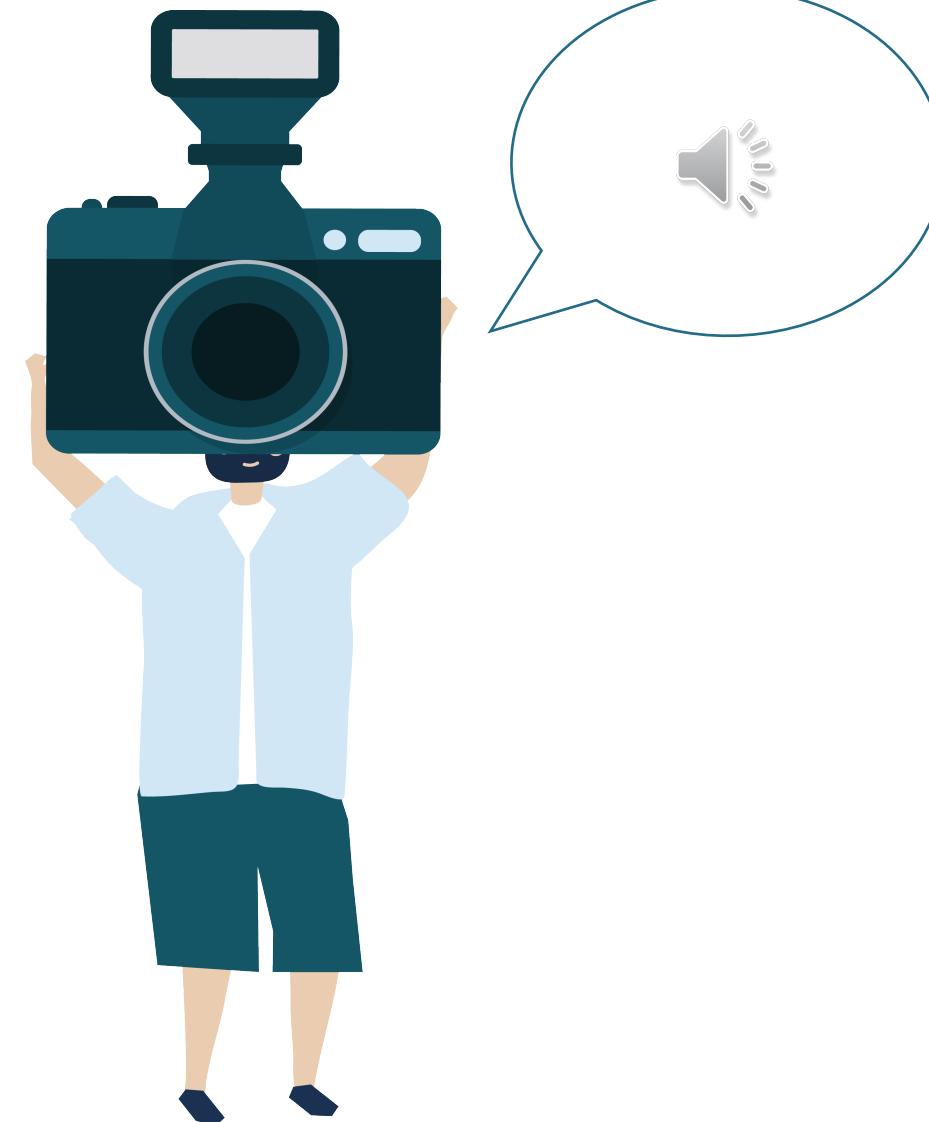
- Key Components
  - Path Finding Functionalities
  - User Interface



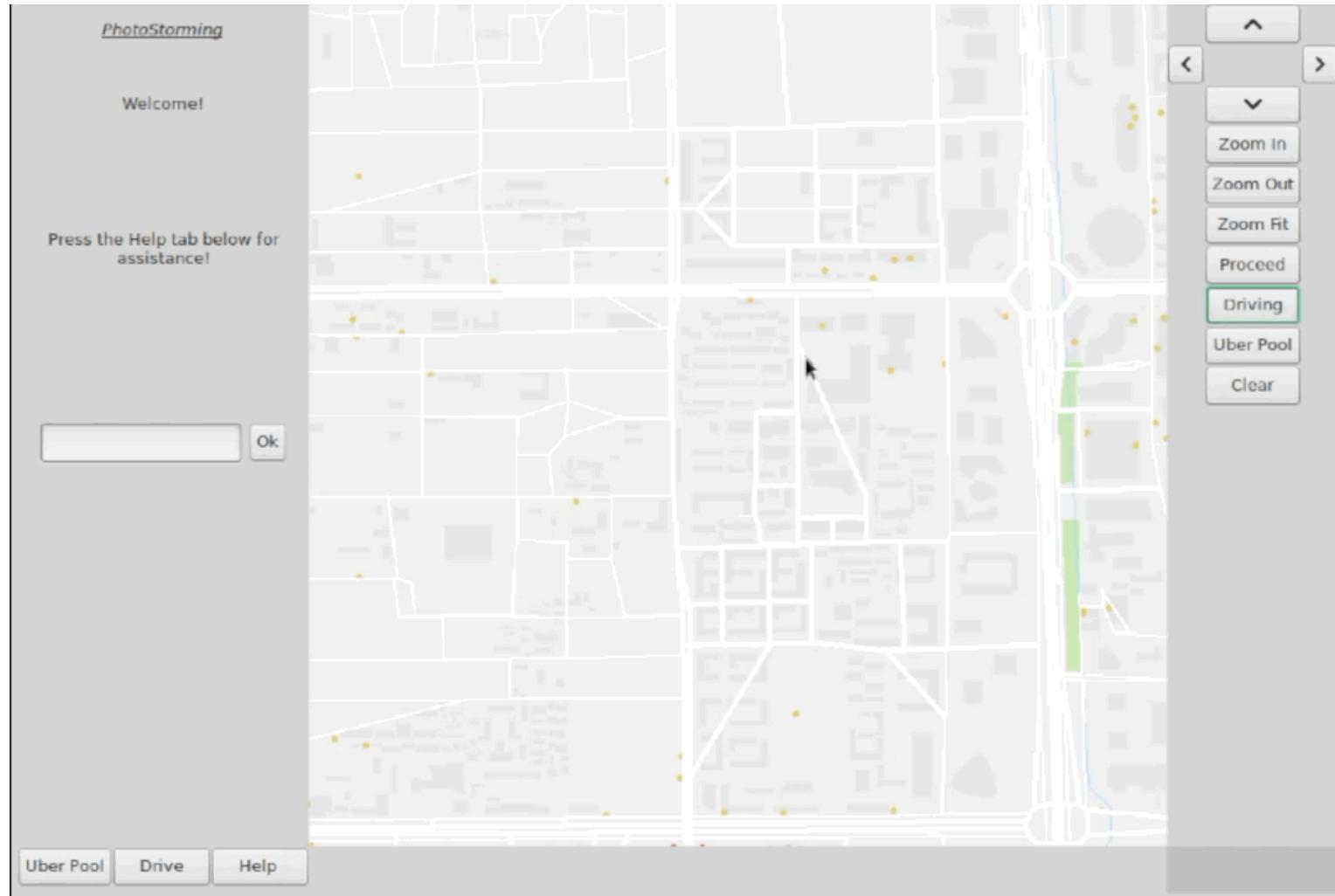
## What's Next

- Benchmarking
- Future Goals
  - Usability
  - Responsiveness

# Hello Bob!



# Let's navigate through the city



# Some Graph Terminology

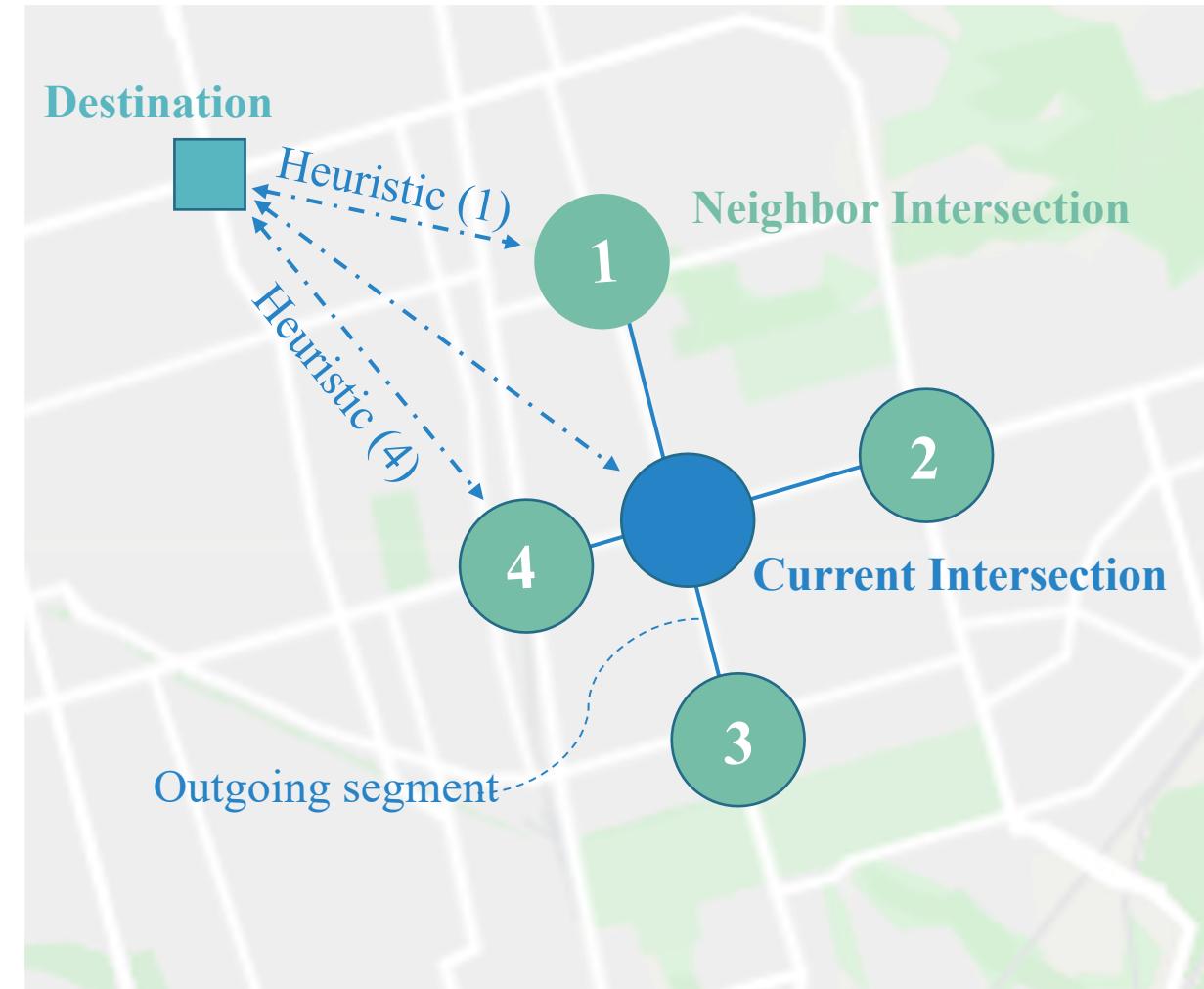
Data structure containing nodes that need to be visited



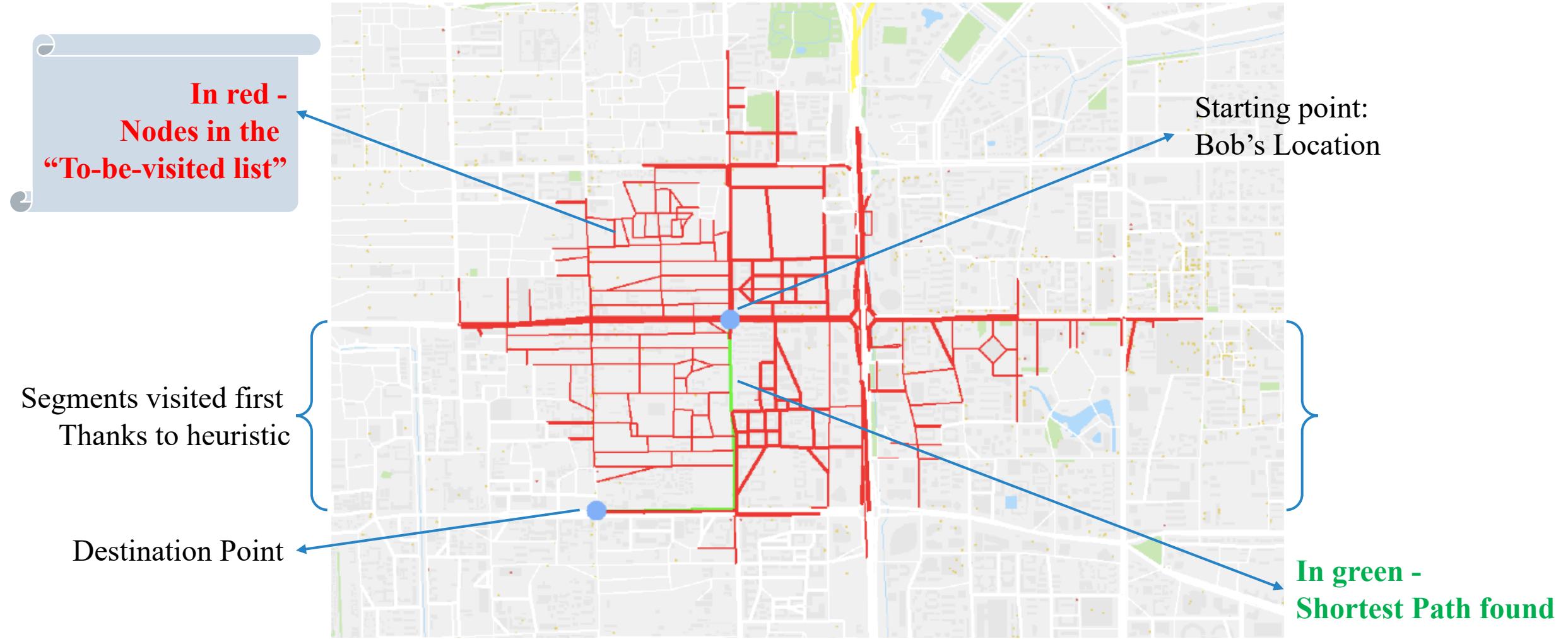
To-do list:

✓ Current Intersection

- Closest to destination ↑
- Neighbor 1
  - Neighbor 4
  - Neighbor 2
  - Neighbor 3
- Furthest to destination ↓

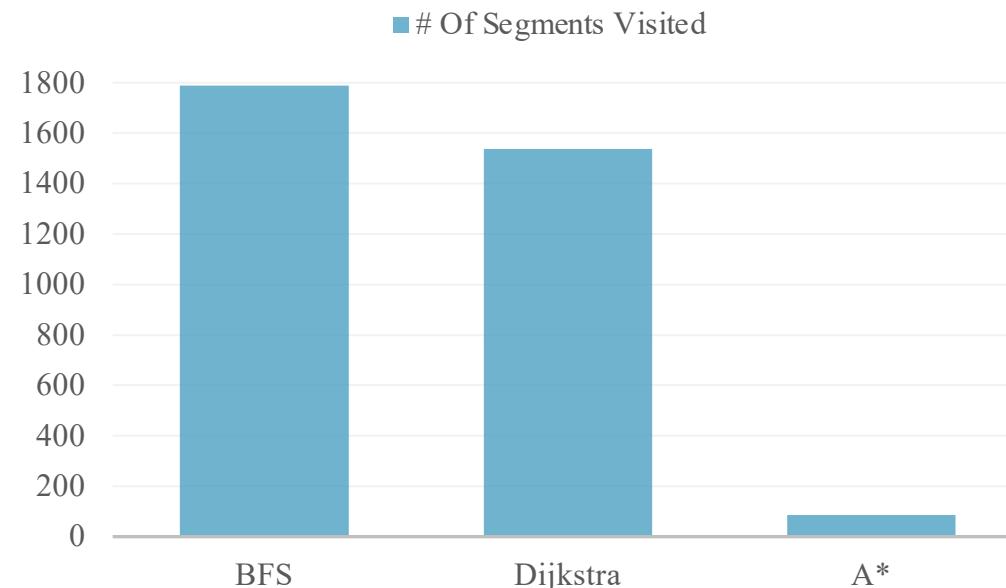
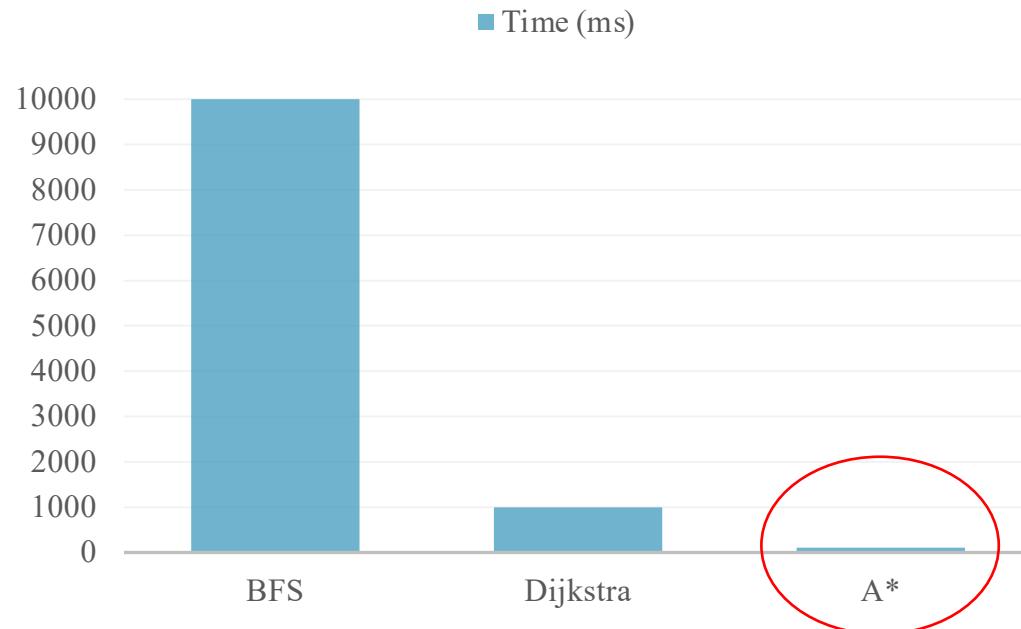


# How A\* Algorithm works



# High Performance thanks to A\* Algorithm

Responsiveness comparison between different Finding Path Algorithms [1]

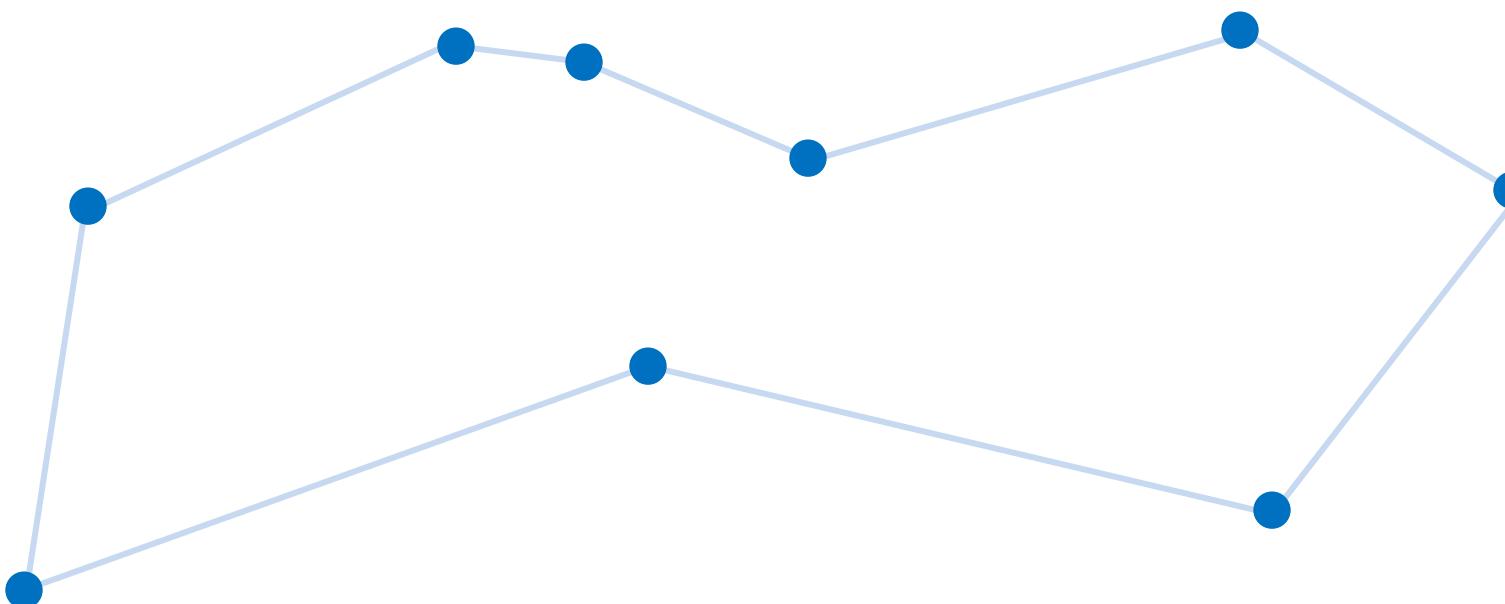


[1] Data extracted form testing done on Team 61 milestone 3 algorithm implementation

[2] Jakob Nielsen, “Response Times: The 3 Important Limits”, nngroup.com , 01-Jan-1993, [Online].

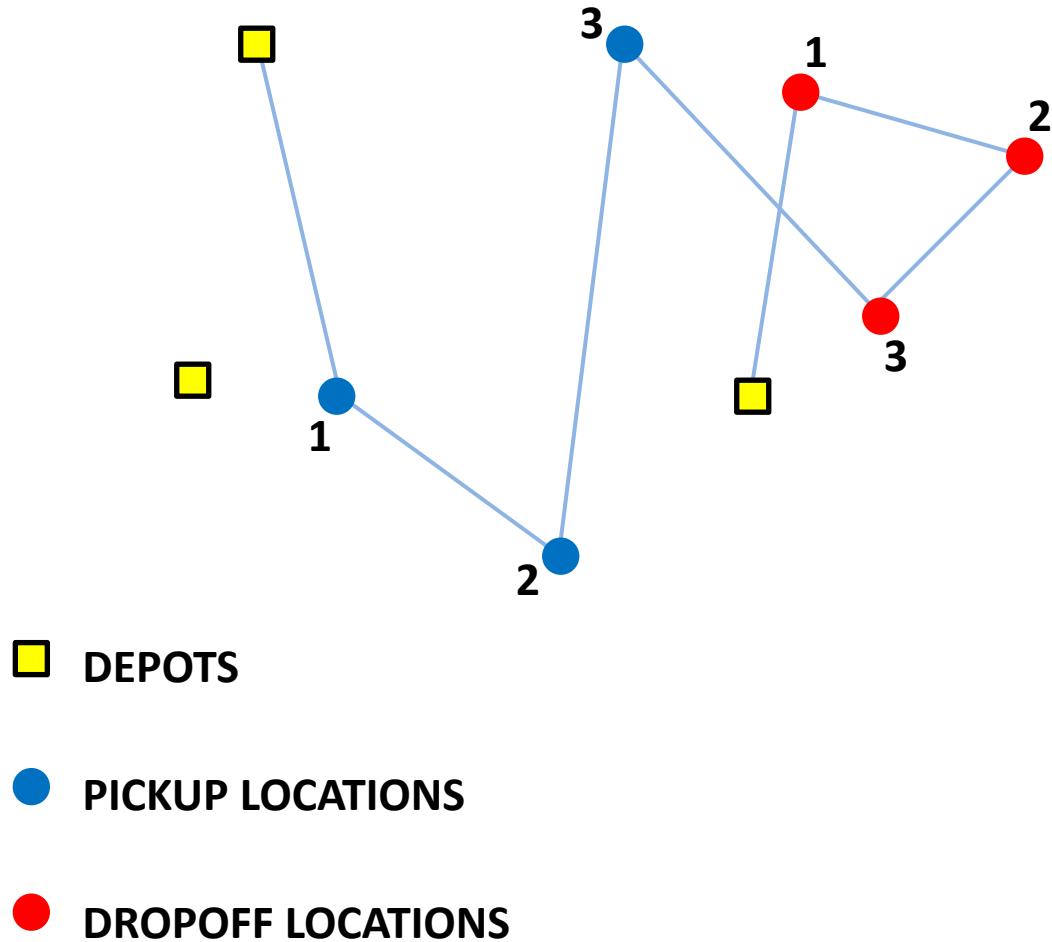
Accessible: <https://www.nngroup.com/articles/response-times-3-important-limits/>

# Courier Delivery Problem



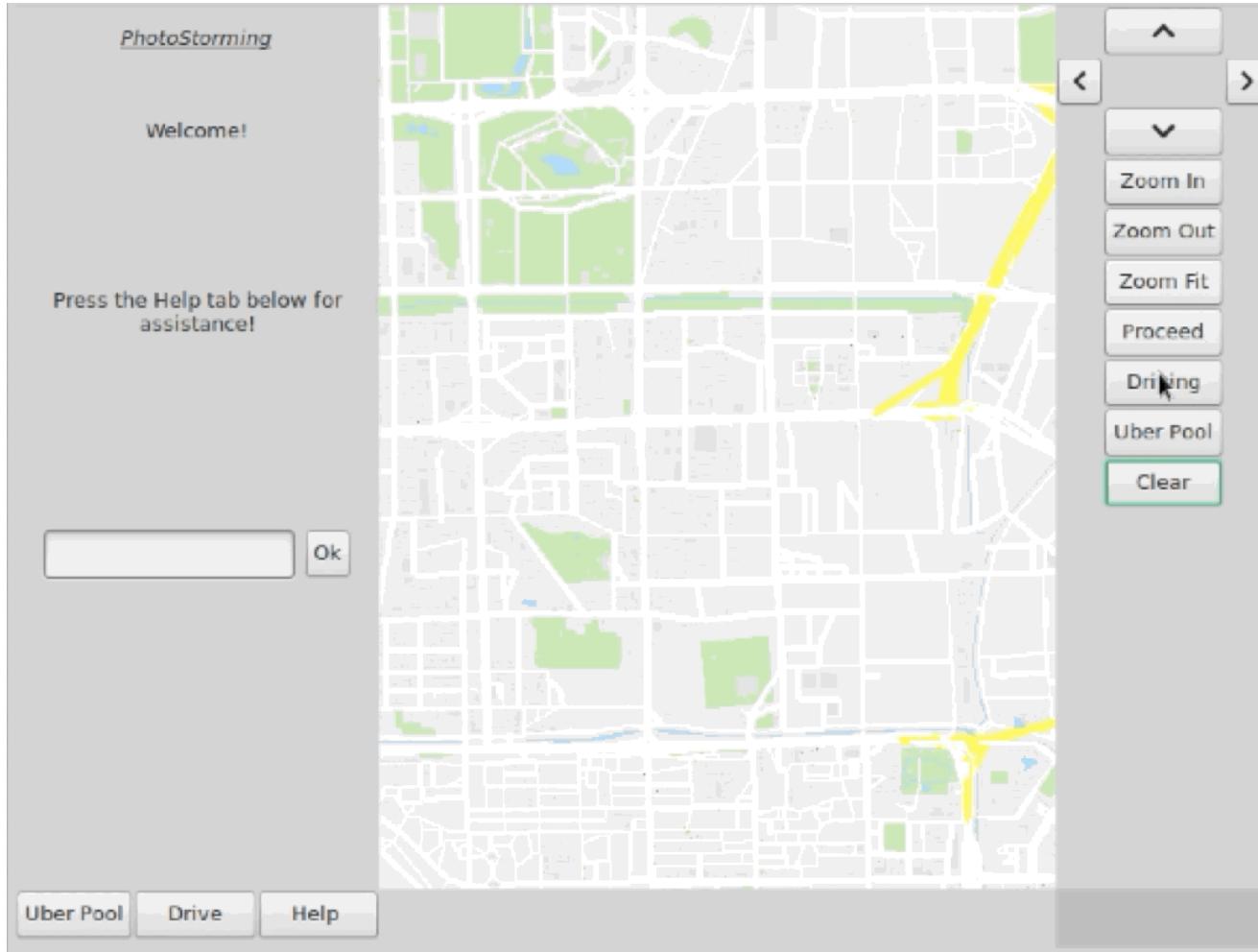
Common Computer Science Problem – Finding the shortest route connecting a bunch of given points.

# Our Algorithm Implementation



- Pick the delivery truck from a random depot and go to the nearest pickup point.
- From current pickup spot, find pickup locations closer than its respective delivery spot.
- If there is space in the truck for the packages, pick the packages from these identified locations.
- Deliver the packages.
- If there are more packages to pick up, repeat process. If not, drive to the nearest depot to drop truck.

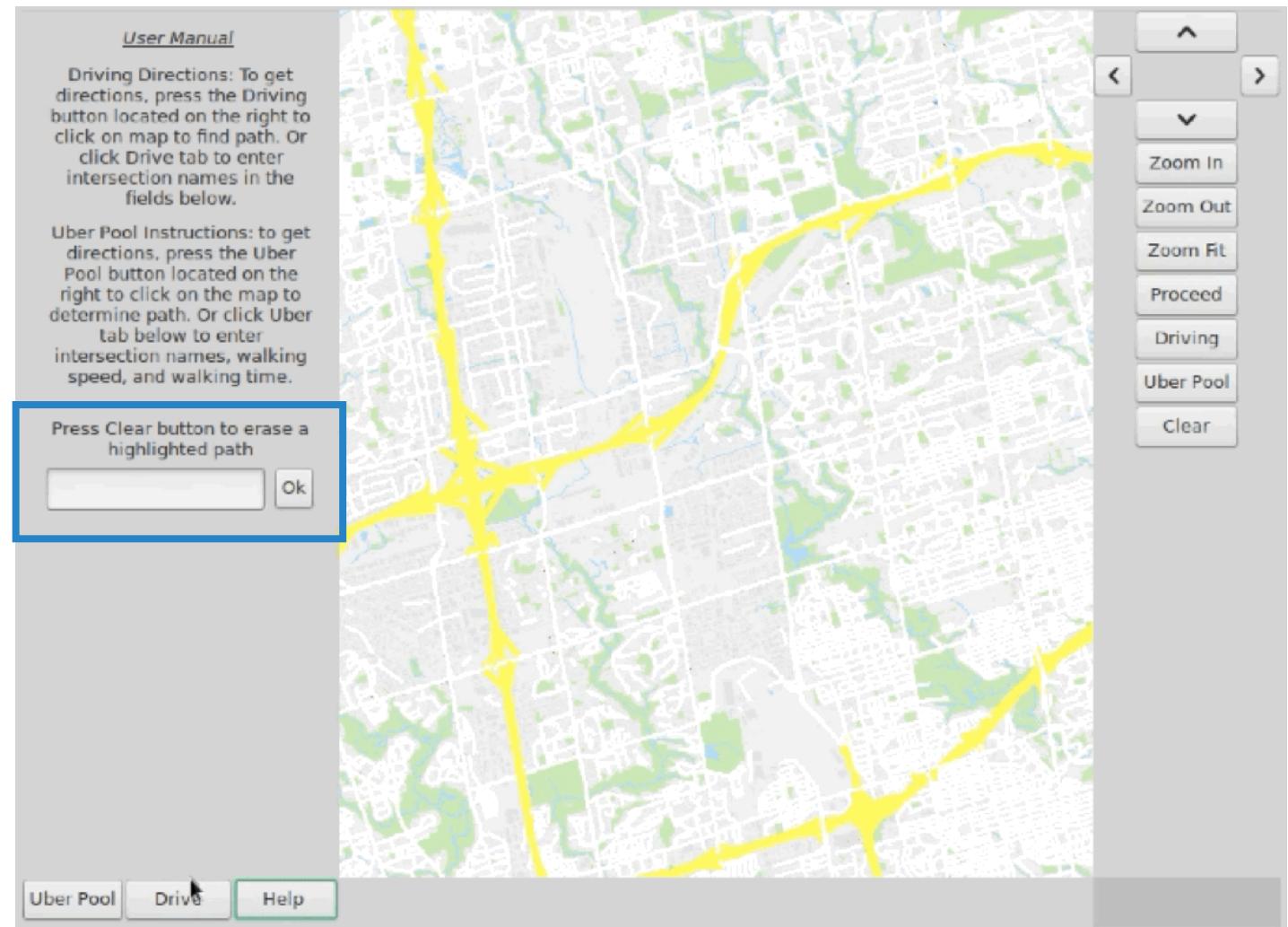
# User Interface: Button Interactions



1. User clicks on driving or uber pool.
  2. Clicks on 2 intersections.
  3. Path is displayed.
- 
1. User clicks on button.
  2. Program gets signal from button press, sets global boolean variable to true.
  3. `Act_on_mouse_click` function looks for global boolean to carry out appropriate function.

# User Input: Intersections Names

1. User inputs the first intersection.
2. User inputs the second intersection.
3. The path is displayed.



# User Input: Finding Matches for User Input

		k	i	t	t	e	n
	0	1	2	3	4	5	6
s	1	1	2	3	4	5	6
i	2	2	1	2	3	4	5
t	3	3	2	1	2	3	4
t	4	4	3	2	1	2	3
i	5	5	4	3	2	2	3
n	6	6	5	4	3	3	2
g	7	7	6	5	4	4	3

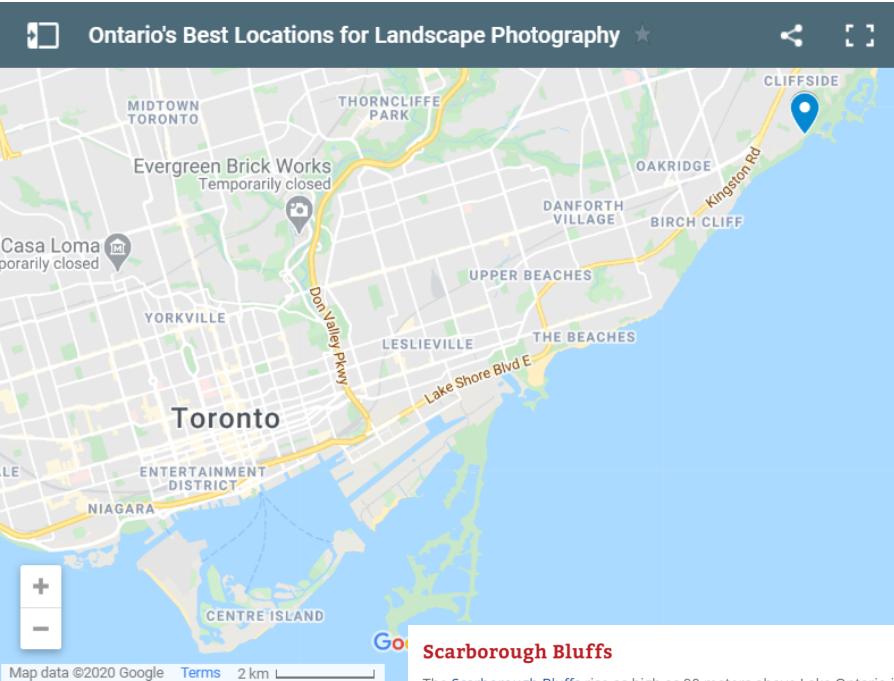
- At each index of matrix, can:
1. Insert
  2. Replace
  3. Delete

Example comparing 2 strings: Levenshtein Distance Algorithm

# Photostorming vs Other Photography GISS



	Photostorming	Loaded Landscapes [1]	ShotHotSpot [2]
POI Categories			
POI Info			
Finding Path functionalities			



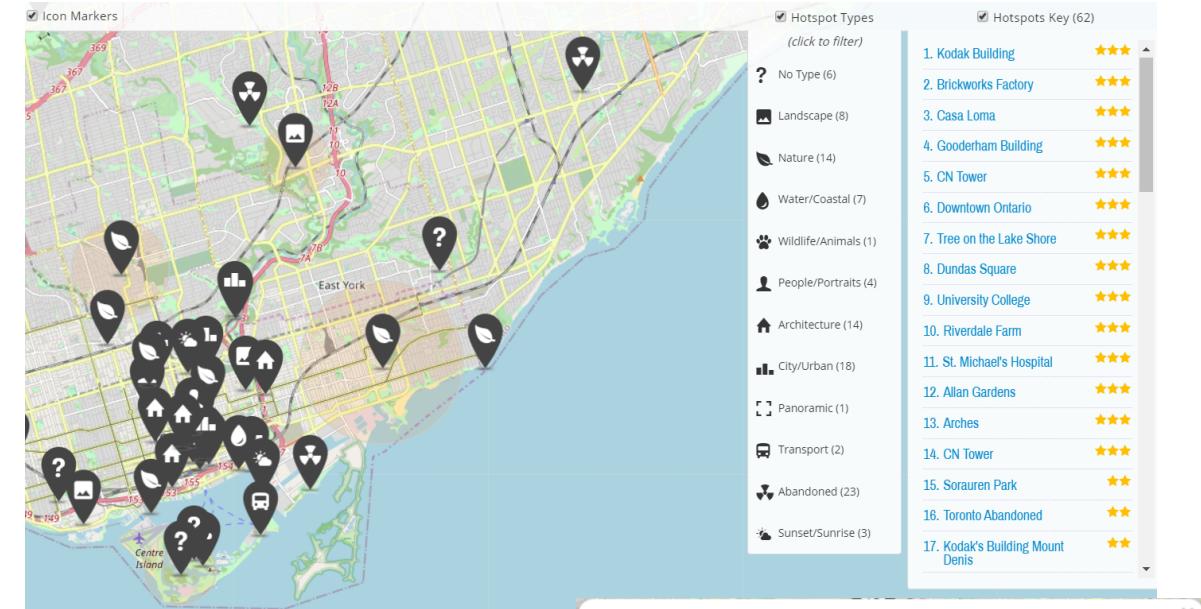
Too Few POI



High Quality POI  
with brief description

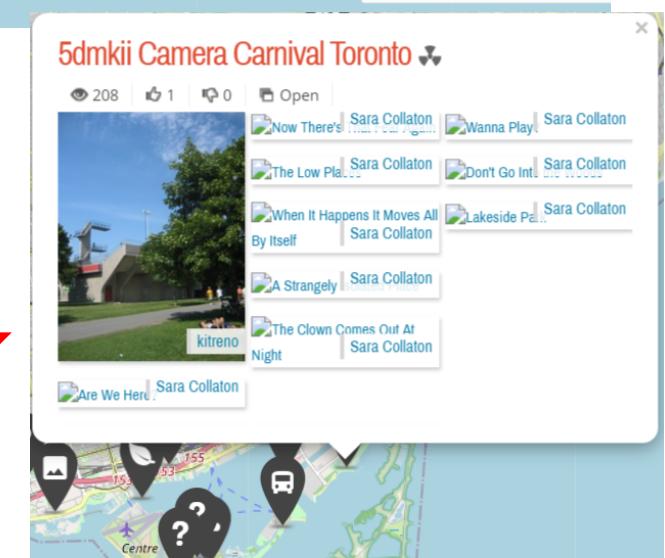
ShotHotspot  
We'll help you find great places to take photos

Too many categories

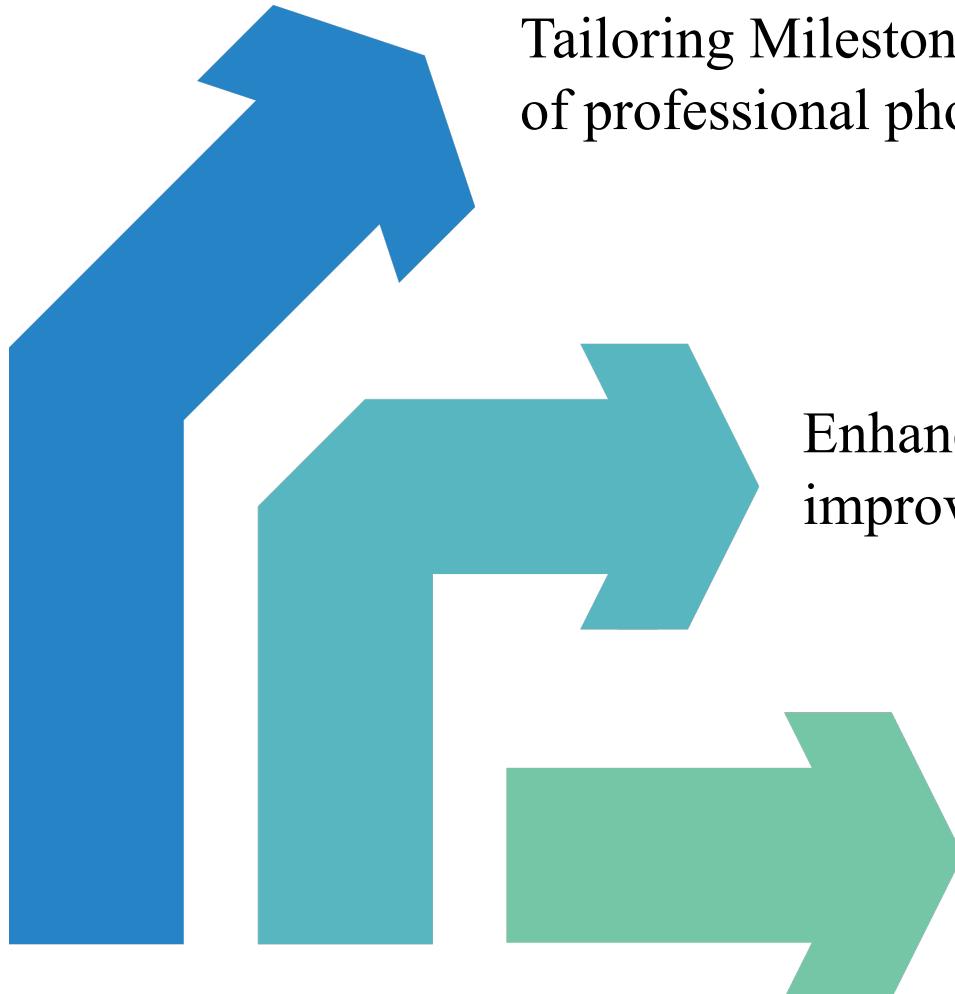


Good amount of POI

Low Quality POI  
without description



# Future Goals and Plans



Tailoring Milestone 4 to the specific needs of professional photographers.

Enhancing the front-end design to improve user experience.

Further testing of responsiveness and usability.

# Our Ultimate Design

User Manual

Driving Directions: To get directions, press the Driving button located on the right to click on map to find path. Or click Drive tab to enter intersection names in the fields below.

Uber Pool Instructions: to get directions, press the Uber Pool button located on the right to click on the map to determine path. Or click Uber tab below to enter intersection names, walking speed, and walking time.

Press Clear button to erase a highlighted path

Ok

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Tommy Thompson Park  
1 Leslie St, Toronto, ON M4M 3M2

Natural park on a narrow peninsula, with 10km of paved trails for walking & cycling. This is a good place for wildlife and nature photography. It also provides amazing views of Toronto's skyline.

Uber Pool   Drive   Help

High Quality Points of Interest

Brief but explanatory description of each POI

5 Categories Only

# To sum up



## Where we are Now

- Key Components
  - Path Finding Functionalities
  - User Interface



## What's Next

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Thank You!

Questions?

