

The background of the slide features a high-contrast, black and white photograph. It shows the lower legs and feet of several people walking on a paved surface, likely a sidewalk. Their long, dark shadows are cast prominently onto the ground, stretching from the left towards the right. The lighting is harsh, creating deep blacks and bright whites, which emphasizes the shapes of the legs and the texture of the pavement. The overall mood is somewhat somber and mysterious, fitting the theme of safety and harassment prevention.

# SEARCH ALGORITHMS APPLIED TO CITIZEN SAFETY AND HARRASMENT PREVENTION

# Presentation of the team



**Julian Valencia**  
Programmer



**Marco Gomez**  
Programmer



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Literature review



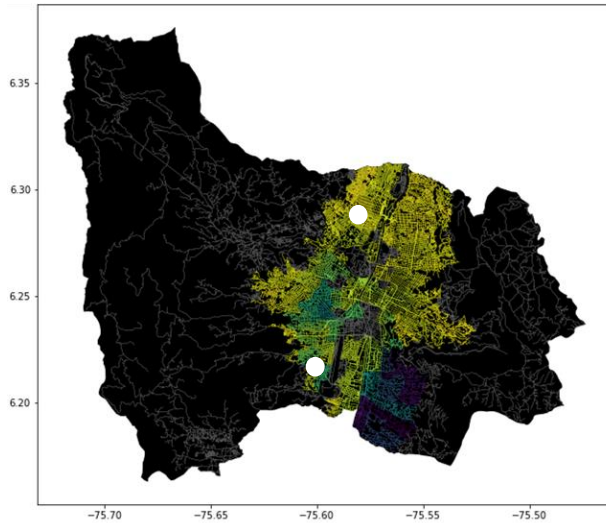
**Mauricio Toro**  
Data preparation



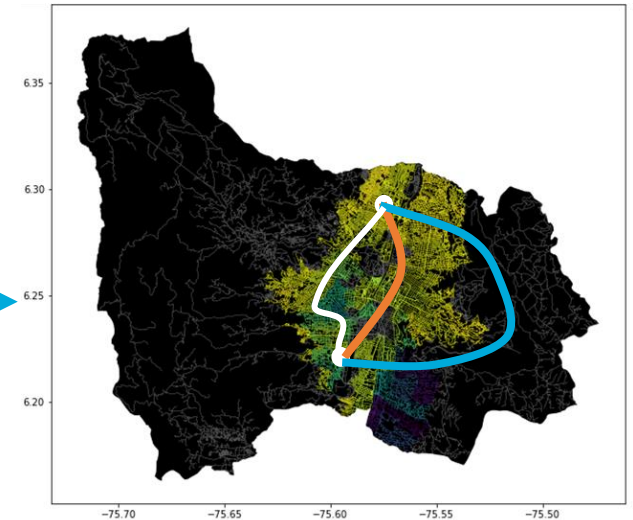
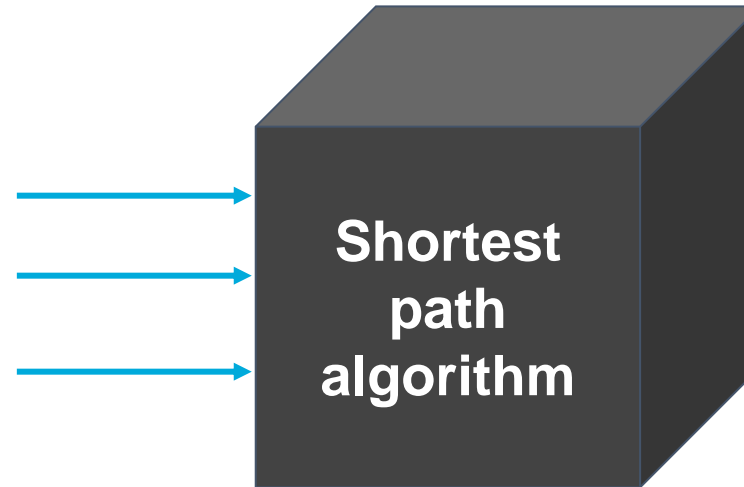
<https://github.com/julianvb03/ST0245-5001>



# Problem Statement



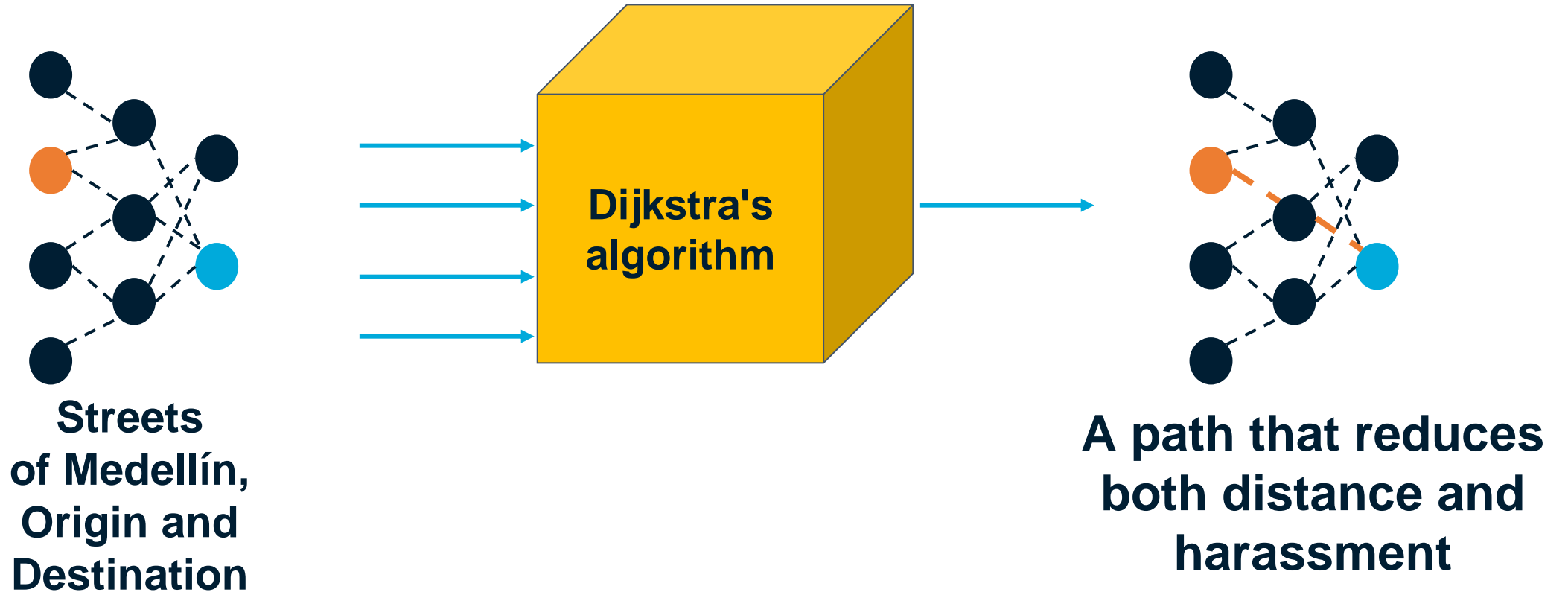
**Streets  
of Medellín,  
Origin and  
Destination**



**Three paths that reduce  
both the risk of harassment  
and distance**



<https://github.com/julianvb03/ST0245-5001>

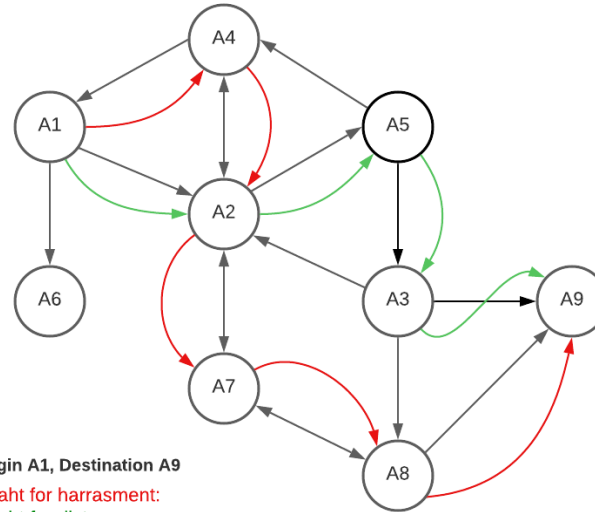
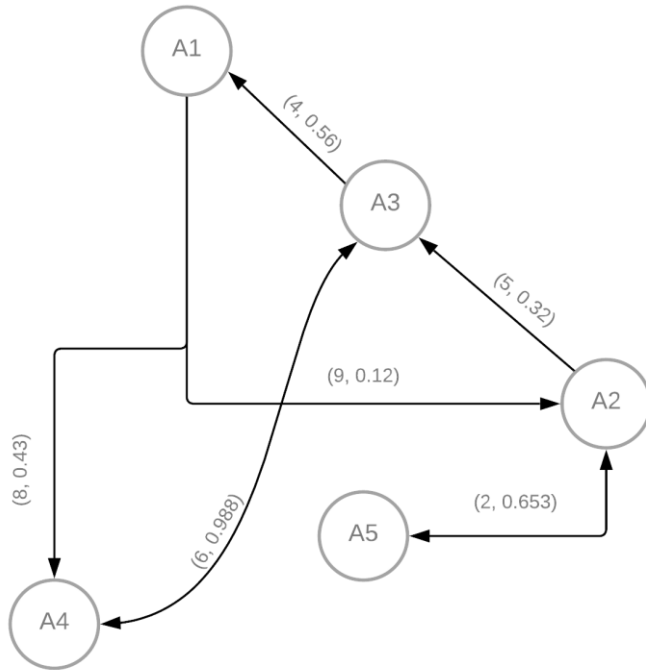




# Explanation of the algorithm



A) Example of map



Origin A1, Destination A9

Paht for harrasment:  
Paht for distance:



## Dijkstra's algorithm

We used python dictionaries to create the graph, and in our case, we have the key which is the unique origins (in polar cords), and the content which are all the adjacent nodes of the vertex. In that way, we can define a graph.



<https://github.com/julianvb03/ST0245-5001>

