

#### **Team Presentation**





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Andrea
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Literature
review



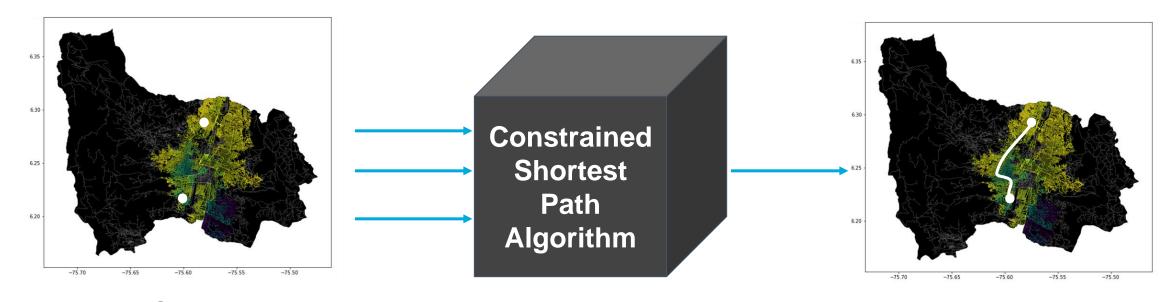
Mauricio
Toro
Data
preparation





#### **Problem Statement**



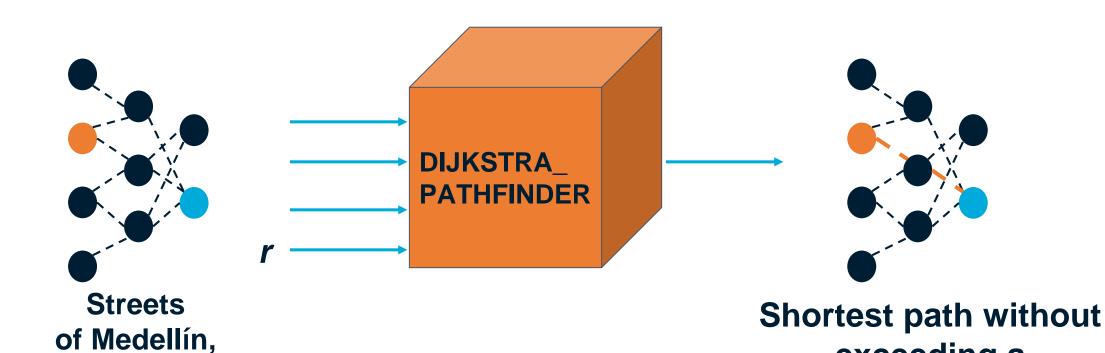


Streets of Medellín, Origin and Destination

Constrained
Shortest
Paths







DIJKSTRA\_PATHFINDER(harassmentRisk)

**Origin and** 

**Destination** 



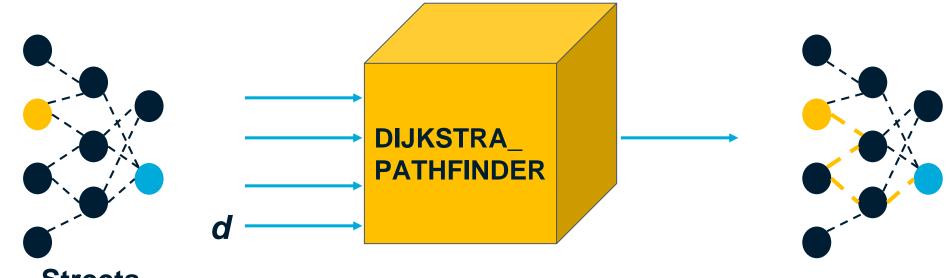
exceeding a

weighted-average risk

of harassment r

### **Second Algorithm**





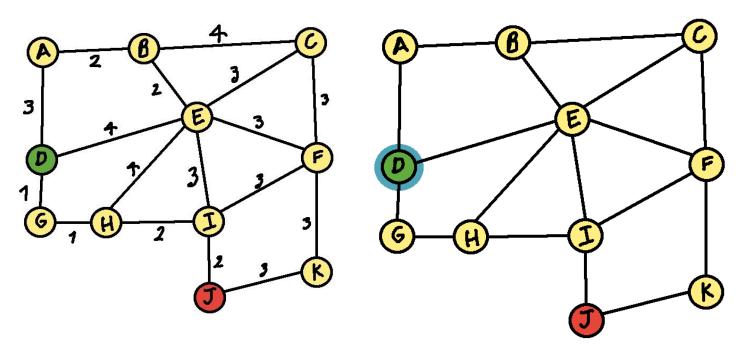
Streets
of Medellín,
Origin and
Destination

Path with the lowest weighted-average risk of harassment without exceeding a distance d



# **Algorithm Explanation**







DIJKSTRA for the Constrained Shortest Path



## **Algorithm Complexity**



	Time Complexity	Memory Complexity
DIJKSTRA_ PATHFINDER	O(n <sup>2</sup> )	O(V²+E)

Time and memory complexity of our DIJKSTRA\_PATHFINDER.

V is the number of vertex (Nodes) and E is the number of Edges (Conections between nodes). Dijsktra works with graphos, so, with the specifications of the worked graph, we can know the both complexities



