





Samuel Rico Author



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Andrea
Serna
Literature review



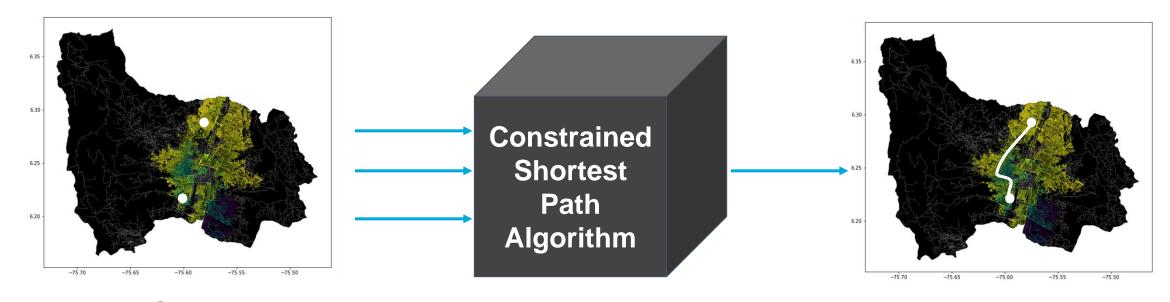
Toro
Data preparation





Problem Statement





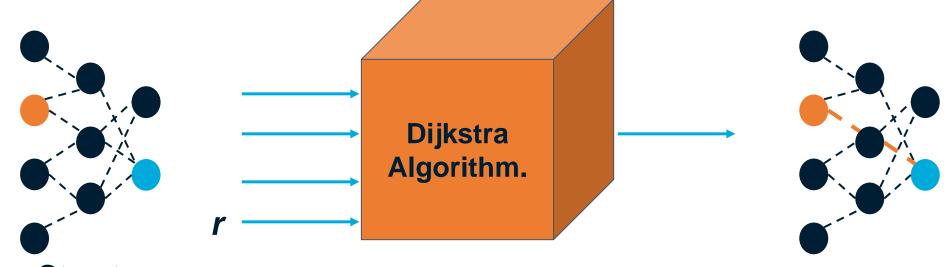
Streets of Medellín, Origin and Destination

Constrained
Shortest
Paths



First Algorithm





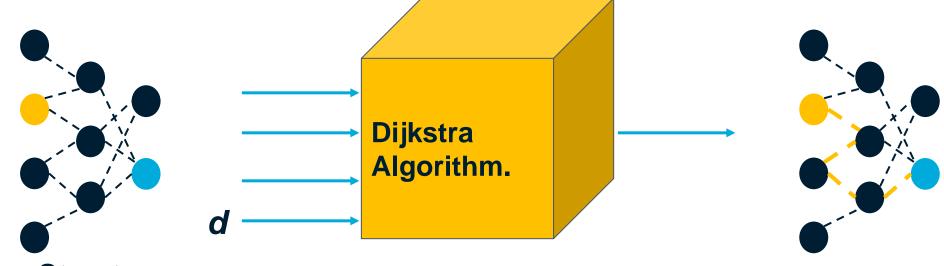
Streets of Medellín, Origin and Destination

Shortest path without exceeding a weighted-average risk of harassment *r*



Second Algorithm





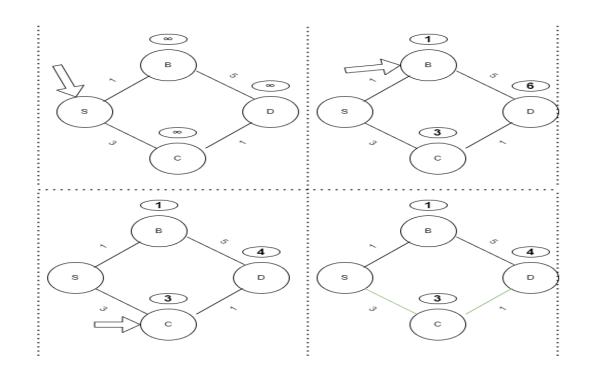
Streets of Medellín, Origin and Destination

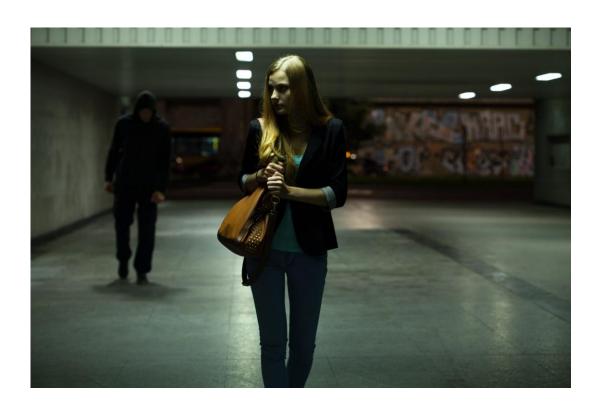
Path with the lowest weighted-average risk of harassment without exceeding a distance d



Algorithm Explanation







Dijkstra Algorithm for the Constrained Shortest Path.



Algorithm Complexity



	Time Complexity	Memory Complexity
Algorithm name	$O(V + E \log V)$	$O(E\log V)$

Time and memory complexity of Dijkstra algorithm. V is the number of nodes and E is the number of edges.



