



MAPPING AGAINST SEXUAL HARRASMENT

Team Presentation



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Investigator



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review

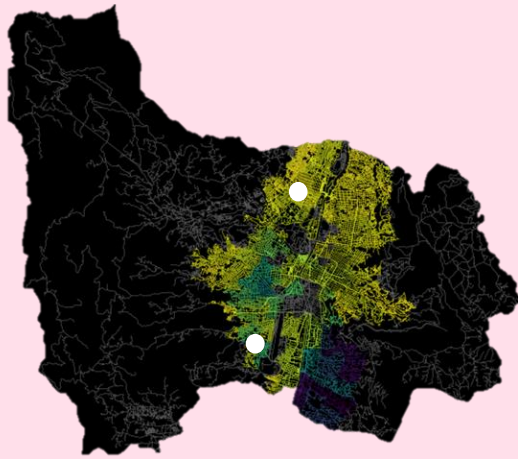


**Mauricio
Toro**
Data preparation

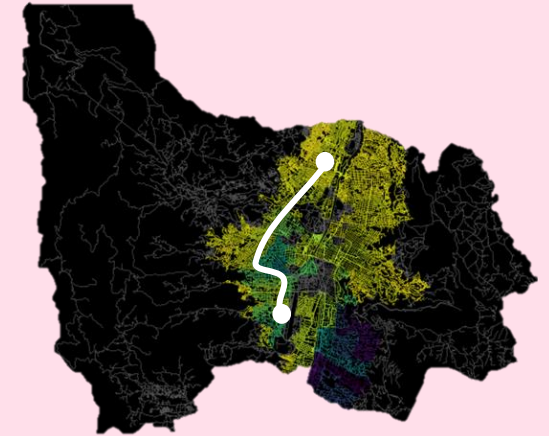


<https://github.com/saradrl/ST0245-001>



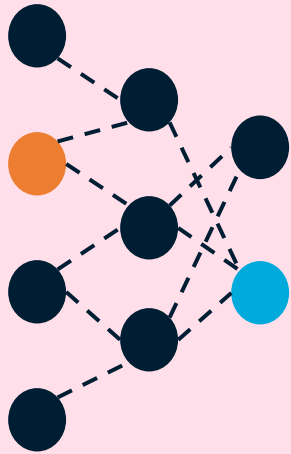


**Streets
of Medellín,
Origin and
Destination**

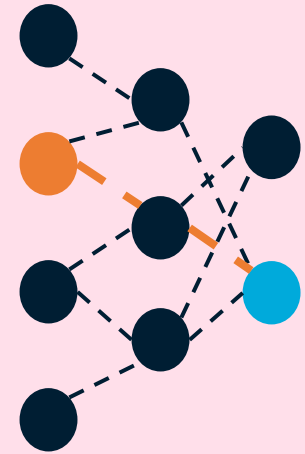
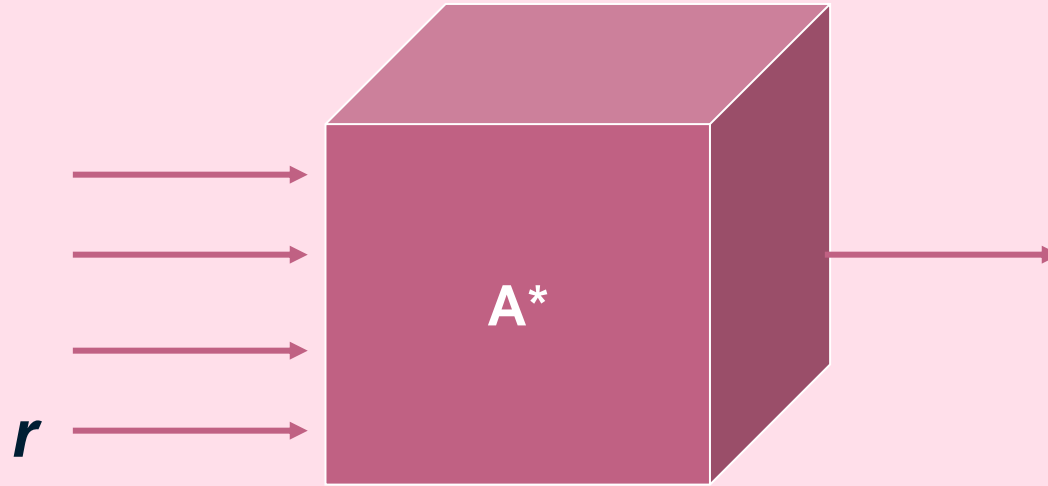


**Constrained
Shortest
Paths**

First Algorithm

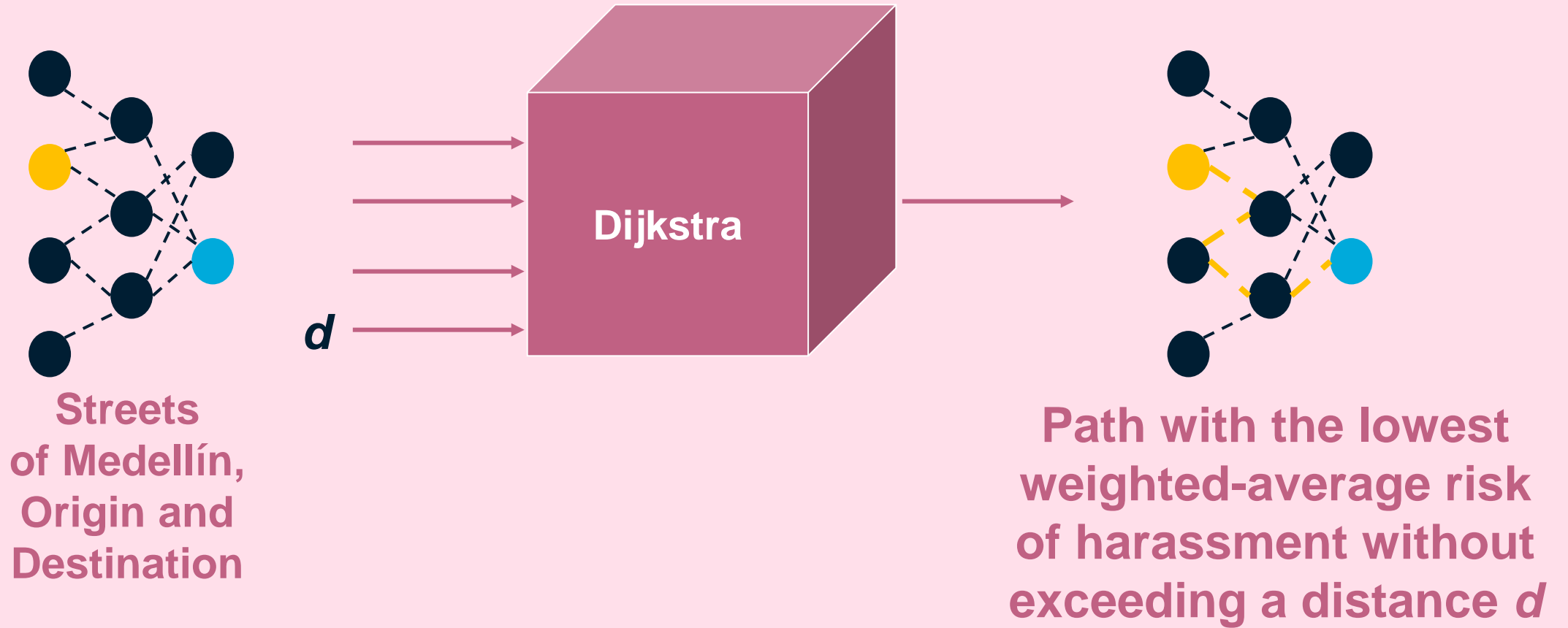


Streets
of Medellín,
Origin and
Destination

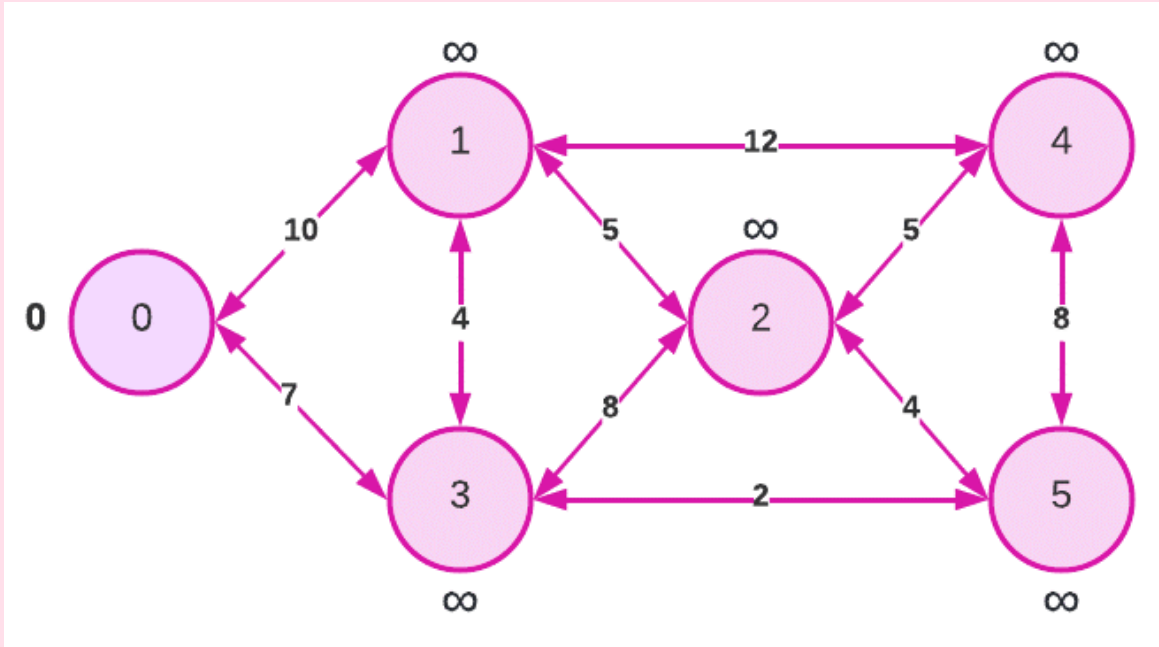


Shortest path without
exceeding a
weighted-average risk
of harassment r

Second Algorithm



Algorithm Explanation



Dijkstra for the Constrained Shortest Path:

The graphic has a groups of nodes, of which everyone of them contains their distances between one and another. Also, the initial node has a value of 0, and the other ones of infinite.

Algorithm Complexity



	Time Complexity	Memory Complexity
Dijkstra	$O(V^2)$	$O(V)$
A*	$O(E)$	Uncertain



Time and memory complexity of the algorithm name. The V represent the vertices, while the E represents edges. Therefore, both algorithms have very good time and memory complexity, but A^* could run faster and save more memory .

Shortest Path Results

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copy pixelated screenshots from the
technical report please!

Origin	Destination	Shortest distance (meters)	Without exceeding a weighted-average risk of harassment
Universidad EAFIT	Universidad de Medellín	??	0.84
Universidad de Antioquia	Universidad Nacional	???	0.83
Universidad Nacional	Universidad Luis Amigó	??	0.85

Shortest distance obtained without exceeding a weighted average risk of harassment r .

Explain the tables in your
own words

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Lowest Risk Results

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Origin	Destination	Weighted-average risk of harassment	Without exceeding a distance (meters)
Universidad EAFIT	Universidad de Medellín	??	5000
Universidad de Antioquia	Universidad Nacional	???	7000
Universidad Nacional	Universidad Luis Amigó	??	6500

Lowest weighted-average risk of harassment obtained without exceeding a distance d .

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Algorithm Execution Times



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⌚ Execution Times



2 hours 51 minutes



6 hours 51 minutes



8 hours 51 minutes



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Please, include measurement units, for
instance, minutes, hours...



Future Work Directions



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Probability

Other risk
estimations

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Optimization 1

Biobjective
optimization

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improve this project

Please, name the courses in which you could continue
working on this project

Statistics 2

MV risk
estimations

S & M 4

Traffic
Estimation

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work directions

Future Work Directions



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Project 1

• • • • •
A Web
Application

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• • • • •
A Web
Application

Project 2

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ML or VR

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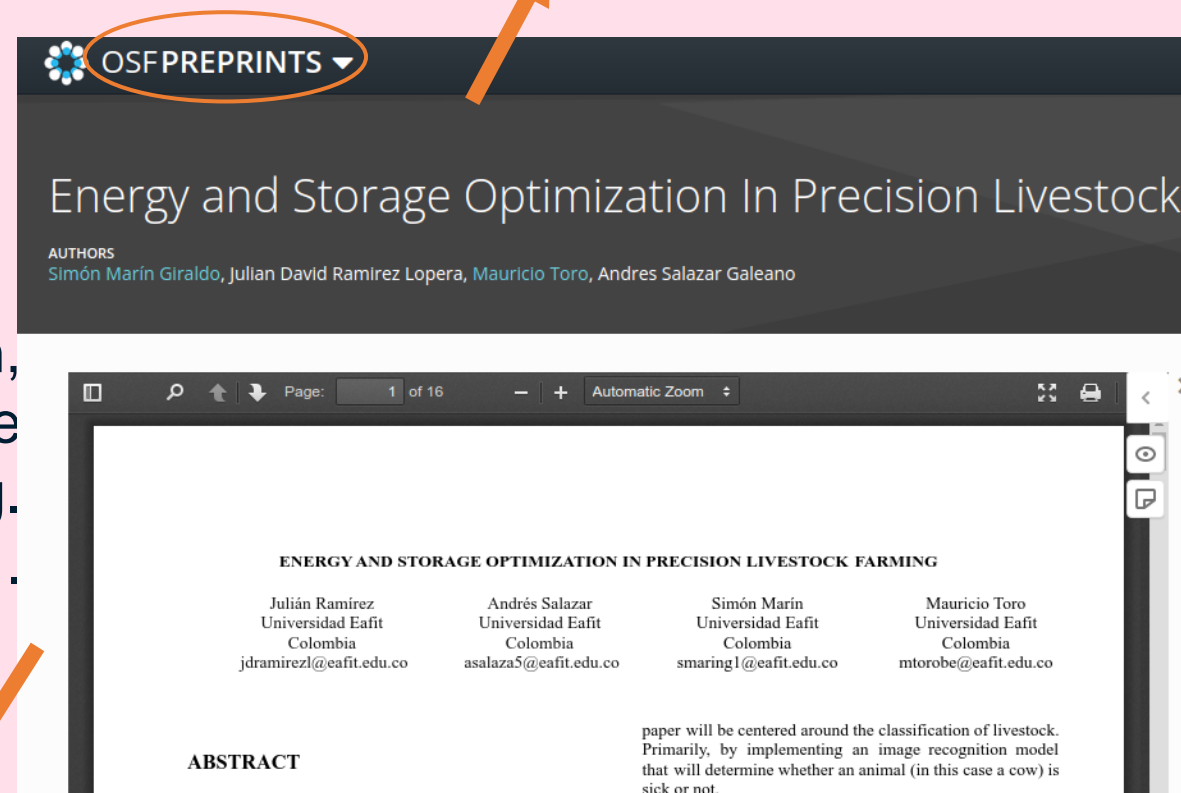
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among the authors, please

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THANK YOU!

Supported by

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