PREVENTION OF STREET HARASSMENT USING AN ALGORITHM TO DETERMINE THE SAFEST PATH

UNIVERSIDAD EAFIT

Presentation of the team

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Data preparation

https://github.com/josedtf/PREVENTION-OF-STREET-HARASSMENT-USING-AN-ALGORITHM-TO-DETERMINE-THE-SAFEST-PATH

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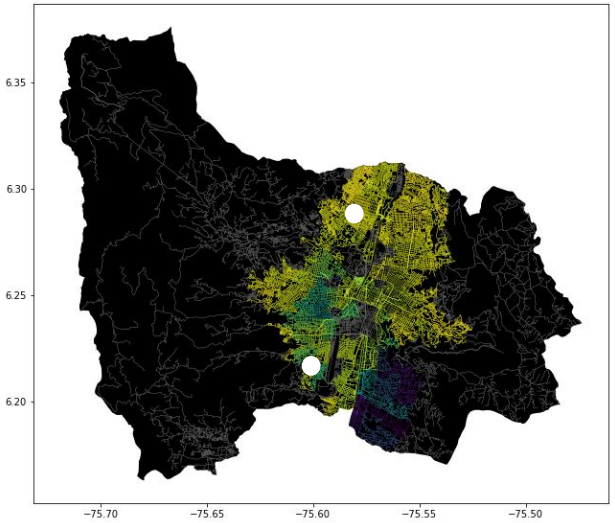
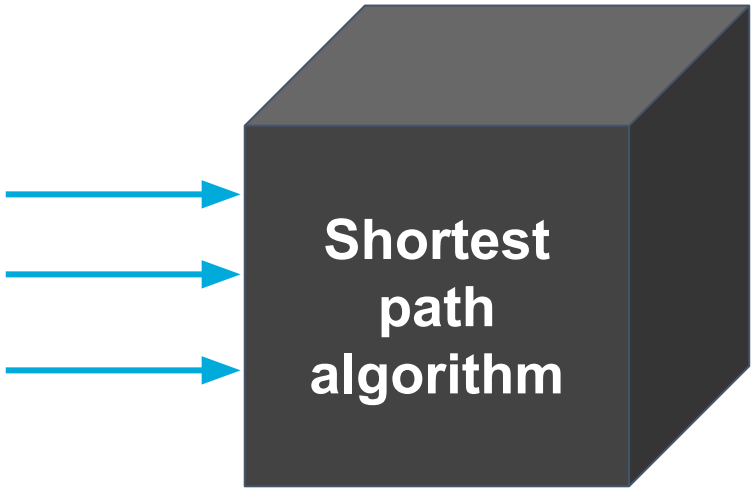
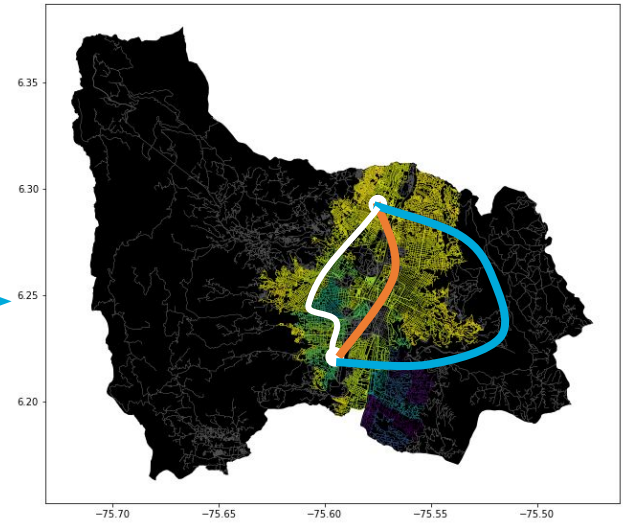
Problem Statement



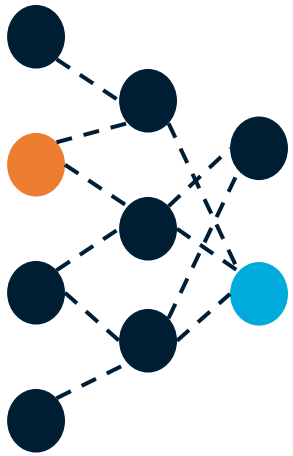
Streets of Medellín, Origin and Destination



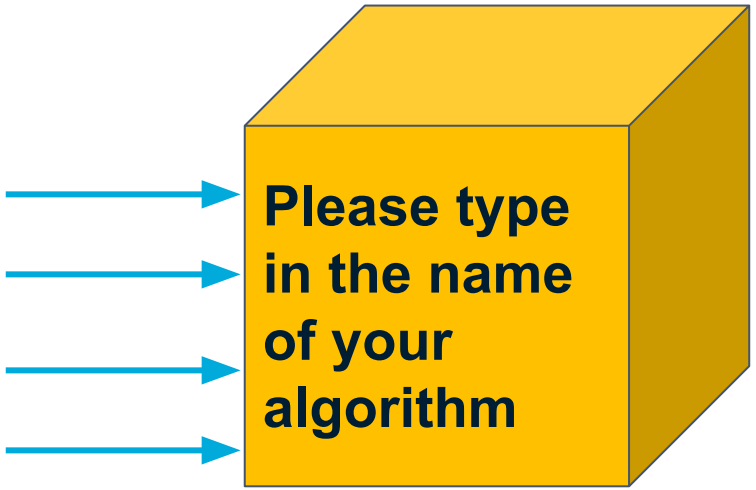


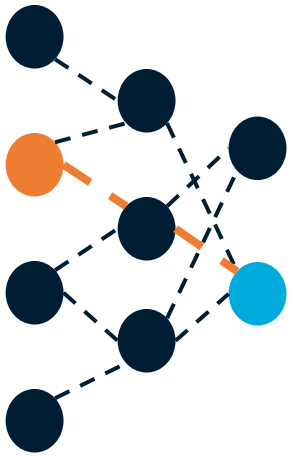
Three paths that reduce both the risk of harassment and distance

Solution Algorithm



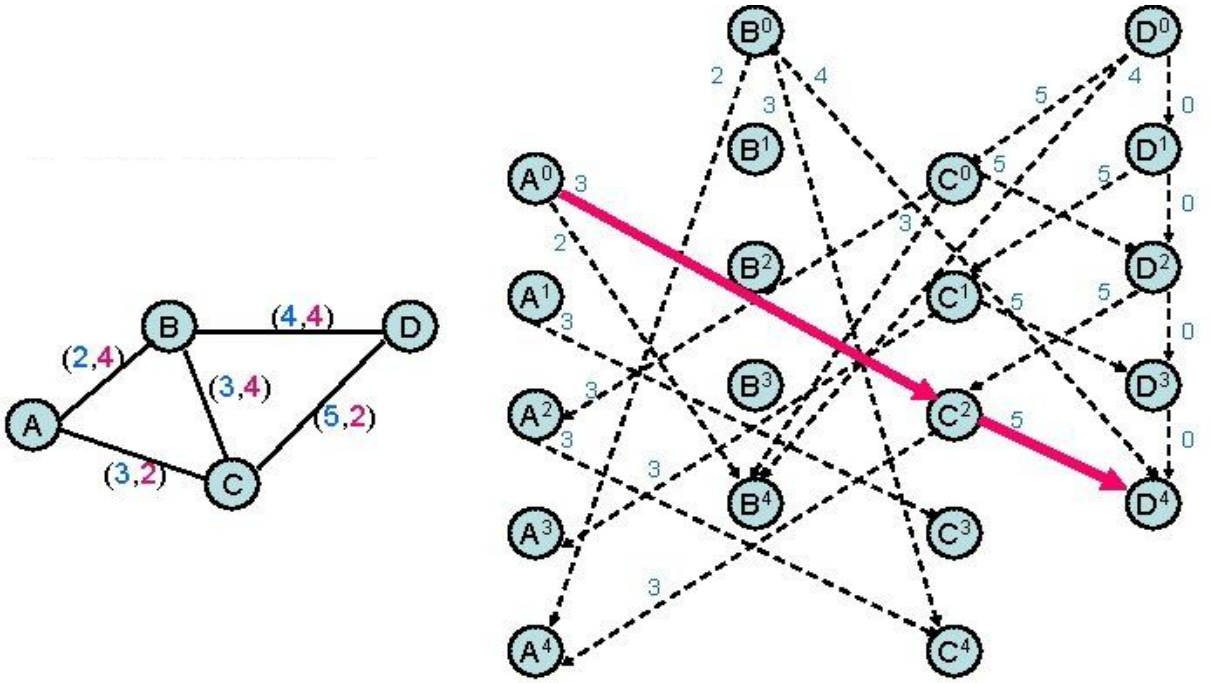
Streets of Medellín, Origin and Destination





A path that reduces both distance and harassment

Explanation of the algorithm



Name of the algorithm for the path that reduces both harassment and distance.

Complexity of the algorithm

	Time complexity	Complexity of memory
Algorithm name	$O(V^2 * E * 2^V)$	$O(E! * V * E * E * 2^E)$
Algorithm name	O(V*V*E*E*E)	O(E!)

Time and memory complexity of the algorithm name. V is...E is...

First path minimizing d = ???

Origin	Destination	Distance (meters)	Risk of harassment (between 0 and 1)
EAFIT University	National University	??	??

Distance and risk of harassment for the path that minimizes d = ??. Execution time of ?? seconds.

Second path minimizing d = ???

Origin	Destination	Distance (meters)	Risk of harassment (between 0 and 1)
EAFIT University	National University	??	??

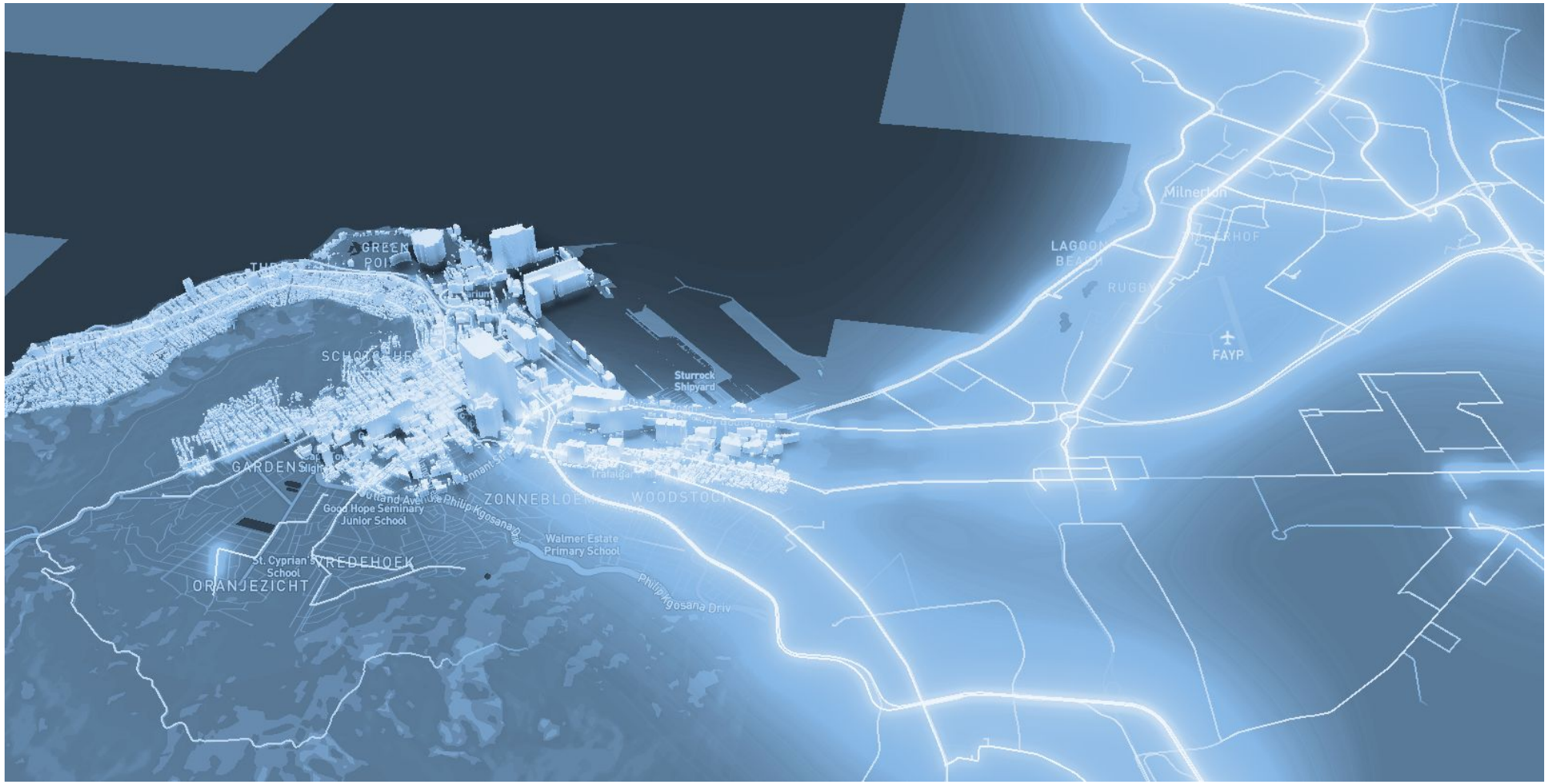
Distance and risk of harassment for the path that minimizes d = ??. Execution time of ?? seconds.

Third path minimizing d = ???

Origin	Destination	Distance (meters)	Risk of harassment (between 0 and 1)
EAFIT University	National University	??	??

Distance and risk of harassment for the path that minimizes d = ??. Execution time of ?? seconds.

Visual comparison of the three paths



Future work directions

Probability

- Other risk estimates

Optimization 1

- Optimization Bi target

Statistics 2

- MV risk estimates

M & S 4

- Traffic Estimation

Future work directions

Databases

- Other variables

Project 1

- Web application

Software Engineering

- Mobile application

Project 2

- Include ML or VR

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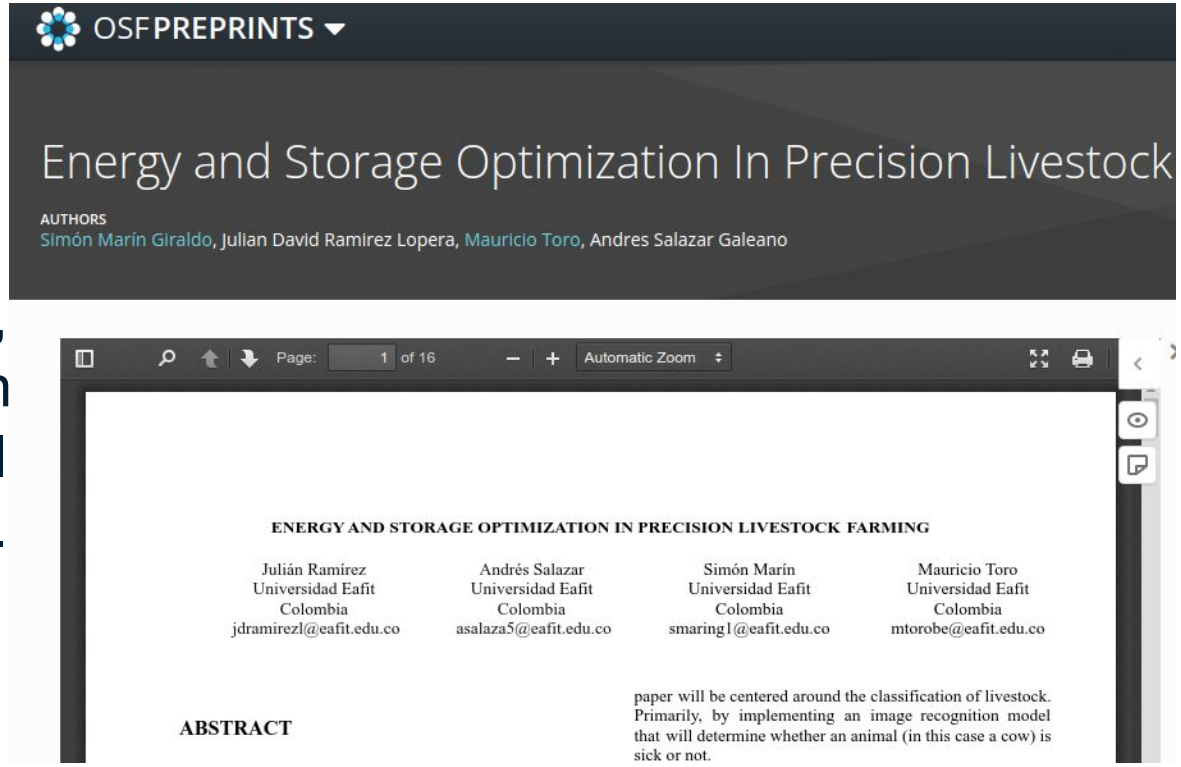
Report accepted in OSF.IO

Julián Ramírez, Andrés Salazar, Simón Marín, Mauricio Toro. Energy and Storage Optimization in Precision Livestock Farming. Technical Report, Universidad EAFIT, 2021. https://doi.org/10.31219/osf.io/du8yt



THANK YOU!

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