**Analyzing the Public Data Hotspots Usage with an Increased Migration across the Darien Province from 2016 to 2023**

GABRIEL ANDRÉS SOTO ORTIZ

McCourt School of Public Policy, Georgetown University

**Application area**

My approach will be a case study/comparative approach. Where I will be assessing the differences on public internet usage across suburban areas in the Darien across time.

I have data on public internet access points locations, data usage across time (not all months), buildings built across time built across Darien (2.5V GEE), migrant entry points and migrant refugee camps sites and the aggregate of people that crossed through these entry points.

Data usage (data [transferred](https://www.datosabiertos.gob.pa/dataset/?q=data+transferida&page=1) since 2018 to 2023) but not for every month

Access point (data from 2020 to 2022), ibid

User sessions (data from to), ibid

I want to see if there is any relationship between the development of more buildings around the refugee camps, the increased number of migrants crossing and the public internet usage in rural and urban areas in Darien.

**Hypothesis**

**First-Order Property**:

* I will research how the intensity of building construction varies across the migration routes over time (I want to look for hotspots of new construction from 2016 to 2023). My hypothesis is that the density of newly constructed buildings is higher near the Migrant Routes, Migrant Reception Communities and Migrant Reception Stations

**Second-Order Property**:

* For my second-order property I want to explore the spatial relationships between new construction buildings with migrant routes, and communities. My hypothesis is that these new constructions are positively influenced by their spatial context (routes, communities or stations) and they cluster around the routes and stations, indicating that migration leads to dense clustered buildings, incrementing social and local economy.

Multivariate morans I

Send txt tif file

- meter data temporal de uso de datos por access points

- agregar datos de cantidad de estudiantes por distrito

https://www.inec.gob.pa/archivos/P030194820231213142523Cuadro%2021.pdf

- agregar un indice normalizado (ya que el numero es muy chiquito) de la cantidad de casas sin internet

https://www.inec.gob.pa/archivos/P0705547520240202111515Cuadro%201.pdf

Future:

- indicadores socioeconomicos a nivel de distrito https://www.inec.gob.pa/archivos/P0579518620240202083001Cuadro%204.pdf

Mark and recapture

Jetstream nsf

Google cloud storage

https://gcsfs.readthedocs.io/en/latest/

<https://www.inec.gob.pa/publicaciones/Default2.aspx?ID_CATEGORIA=19&ID_SUBCATEGORIA=71>

Story map

<https://storymaps.arcgis.com/stories/17e4021464f84f379533fd400133073a>

Compara mapa

<https://drive.google.com/file/d/10R-AC0CkGiBFQvozIa2zKq7TA4QLLACd/view>

Illegal routes community centers (tacarti, el abuelo, cañas blancas, dos bocas, come gallina)

<https://newsroompanama.com/2024/09/01/illegal-migrants-camp-in-the-darien-starlink-satellite-antennas-seized/>

<https://cnnespanol.cnn.com/2024/07/24/hallan-10-migrantes-muertos-rio-frontera-panama-colombia-orix>

<https://www.infobae.com/colombia/2024/09/01/ubican-campamento-clandestino-de-migrantes-irregulares-en-la-selva-del-darien-en-la-frontera-entre-colombia-y-panama/>

<https://console.cloud.google.com/storage/browser/open-buildings-temporal-data/v1/geotiffs/8e4dc_2016_06_30;tab=objects?pageState=(%22StorageObjectListTable%22:(%22f%22:%22%255B%257B_22k_22_3A_22_22_2C_22t_22_3A10_2C_22v_22_3A_22_5C_22tile_qIR728gxJig.tif_5C_22_22%257D%255D%22))&prefix=tile_qIR728gxJig.tif&forceOnObjectsSortingFiltering=false>

<https://console.cloud.google.com/marketplace/product/google/compute.googleapis.com?project=museto&returnUrl=%2Fcompute%2Finstances%3Fproject%3Dmuseto&inv=1&invt=Abj48Q>

<https://colab.research.google.com/github/google-research/google-research/blob/master/building_detection/open_buildings_temporal_download_region_geotiffs.ipynb#scrollTo=UajWyhy2s2KG>

<https://aplicaciones.asep.gob.pa/telec/html/consulta_antenas.php>