

Luis Guillermo Natera Orozco

Data Analyst

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Motivated, interdisciplinarity team-work oriented, and responsible Data Analyst with significant experience working in urban mobility and data analysis. Highly educated, finishing a Ph.D. in Network Science from the Central European University, where I developed new data methods for the analysis of large-scale urban mobility network data, along with the designing of new algorithms to quantify urban liveability and connectivity improvement for bicycle infrastructure networks.

I am interested in data analysis as an engine to improve the world, and face the future challenges that we will face as humanity such as climate change, increased connectivity, and pollution.

TECHNICAL SKILLS

Data management

PostgreSQL, PostGIS, Data Analysis, Pattern & Trend Identification, Data Visualization, Data wrangling with Python

Computational tools

Python (+5 years experience), Jupyter Notebooks & Jupyter Lab stack, GeoPython stack (GeoPandas, MovingPandas, Kepler, H3, OSMnx, Google Maps API), Sci-kit learn, Django (intermediate), HTML (intermediate), CSS (intermediate), Javascript (beginner), SQL (intermediate), \LaTeX (intermediate), Git + {GitHub, GitLab, Bitbucket}, Ci/Cd, AWS (RDS, S3, EC2), Tableau (intermediate)

Research methods

Urban planning, Network & Data science research methodologies, Data mining, Statistical analysis

WORK EXPERIENCE

Agglomeration and Social Networks Research Lab

Research fellow

07/2021 - Present

Urban mobility and COVID-19

Data analyst. Analyzed GPS mobility data to provide insights regarding the impact of COVID-19 in the urban mobility of Budapest.

Cities Observatory (ITESM)

Data and network science consultant

05/2020 - Present

Accessibility and mobility analysis

Project manager & Data analyst. Coordinate with the data science team the development of a methodology to measure urban accessibility in 75 Mexican cities using open data. The findings are currently being used to lobby local governments to improve the urban conditions.

Air quality during COVID-19 pandemic lockdown

Project manager. Coordinated a team of researchers to design and develop a methodology to measure the changes in air quality for the cities of Mexico City, Guadalajara, and Monterrey during the COVID-19 lockdowns.

LAC_analytics

Co-founder

01/2020 - Present

City Intelligence

Project manager & Developer. Coordinated the development of a data-driven web platform and API for the analysis of cities and amenities. Some applications of the platform and the data are: location intelligence for real estate, traffic, and public transport, and the analysis of the urban mobility of the city.

Evaluation of air quality and urban environment

Data analyst. Analysis and data visualization for air quality data in the area where a new public transport system is being built. This project was a collaboration within multiple actors, including Google.org, and the Government of Jalisco.

Central European University

Ph.D. Researcher

08/2017 - Present

Multimodal Fingerprint of Urban Transportation Networks

Data scientist & analyst. Development of computational methods for the analysis of urban form in multiple cities. The methods were used to identify patterns in urban mobility infrastructure, and to provide insight on the future of the cities.

Bicycle infrastructure network analysis

Data scientist & analyst. Research and design of algorithms to evaluate and improve the connectivity of bicycle infrastructure networks. The algorithms were applied to fifteen different cities in the world, and the results were published in the journal Royal Society Open Science.

Quantifying life quality as walkability

Data scientist & analyst. Analysis of pedestrian urban accesibility metrics to quantify the liveability of a given city. The project was developed for the Budapest municiaaplity as part of a strategy to dectect oportunities around the city and to develop data-driven public policies.

Signa_Lab

Executive Coordinator

08/2016 - 08/2017

Online social networks analysis

Project manager & Data analyst. I coordinated the research and development of methodologies to analyze social media data (Twitter, Facebook, and Youtube) to identify patterns and trends in online political conversation.

Mesura

Networks Analyst

10/2015 - 08/2017

Online social networks analysis

Data analyst. Worked with multinational clients to analyze and improve their social media presence. I developed tools to automatize the data collection with the use of APIs.

IMTJ (Mobility Institute of the State of Jalisco)

Analyst

1/2014 - 10/2014

Sustainable urban mobility

Public policy analyst Worked with a team of urban and mobility planners to develop the public policies and technical specifications for the operation of the first bike share system in Guadalajara, Jalisco. México.

Colectivo Triciclo

Co-Founder, Principal Architect

8/2010 - 1/2014

Architecture and urban design

Architect. Co-founder of my own architecture studio. I was responsible for the design of private houses and the development of urban interventions, such as a pop-up neighborhood reading kiosk.

OTHER WORK EXPERIENCE

Teaching

07/2017 - Present

Python for Social Scientist

I have taught introductory Python courses for social scientists in multiple places, such as Leibniz Institute for the Social Sciences, European Consortium of Political Research, and the Central European University.

Introduction to Network Science

I have developed and taught introduction courses to Network Science for non-technical people in interdisciplinary settings. Such courses were developed to facilitate the understanding of complex systems in a friendly and interactive way.

EDUCATION

Ph.D. Network Science, Central European University, Budapest, Hungary. 2021 (expected)

M.A. Communication of Science and Culture, ITESO, Tlaquepaque, Mexico. 2015
Academic Visit. Center for Civic Media, MIT Media Lab, Boston, USA. 2015

B.Arch. Architecture, ITESO, Tlaquepaque, Mexico. 2010
Academic Visit. Universidad de Valparaíso, Valparaíso, Chile. 2012

AWARDS

2020 Award for Advanced Doctoral Students. Central European University

2019 Best lighting talk award. International Conference in Complex Networks and their Applications.

LANGUAGES

Spanish Native

English Professional proficiency

Updated October 2021