

# Raúl Alejandro Carvajal Téllez

## Geographical and Environmental Engineer

Thesis: *Analysis of the urban heat island at surface and canopy level in the period from 1981 to 2015 for the city of Bogotá Colombia* [Link](#)

No Professional card: [091231-0520345 CND](#)



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## PERSONAL PROFILE

As a geographic and environmental engineer, I have developed skills that allow me to abstract the territory as an open system, evaluating and thinking about my activities from interdisciplinary points of view. I like to see my responsibilities as challenges that help my personal and professional growth with which I achieve greater enthusiasm in their development. I am passionate about learning and focus my skills on expanding my knowledge.

## WORK EXPERIENCE

- **Property recognition and delimitation, San Martin de Amacayacu Indigenous Community** / Boss: José Gregorio Vásquez (Territory Secretary)

Year 07/06/2018 - 30/08/2018 – Leticia, Amazonas

Through RAPS, carry out a flight plan that allows generating base cartography that supports field work for the alignment and recognition of properties in the San Martin de Amacayacu indigenous community, generated this product, was elaborated property cartography, in addition to neighborhood agreements that allow ways for the good coexistence of the community.

- **Administrative support and GIS, Consortium MC Ingeniería** / Boss: Jorge Enrique Ángel Villada (Technical coordinator)

Year 01/10/2018 - 31/12/2018 – Leticia - Bogotá

I participated in the update of the Leticia PBOT. Territorial analyzes through GIS and work with communities led me to develop methodologies for the integration of technical and local knowledge.

- **Thematic advisor, Innovation Group Esri Colombia** / Boss: Aarón Ramírez (Coordinator)

Year 01/11/2019 – 31/01/2022 – Bogotá Colombia

I participated in the CENTINEL-COVID project led by Andrés González Díaz developing GIS systems for monitoring and tracking COVID-19 cases, as well as comorbidities and vulnerabilities belonging to risk groups. I also participated in the Bogotá metropolitan project led by Dr. Pablo Leyva Franco, multi-temporal analysis of the transformation of coverage in the Bogotá savannah from Landsat 4-5-7 and 8 images.

- **Deforestation monitoring and tracking system – San Martin de Amacayacu, San Martin de Amacayacu Indigenous Community** / Boss: José Gregorio Vásquez (Territory Secretary)

Year 15/09/2020 – 20/30/2021 – Leticia, Amazonas

Using the Google Earth Engine platform and the repository of SAR images with Sentinel 1 and optical images with Sentinel 2, the deforestation monitoring and tracking system was built.

- **Internship as thematic advisor, Laboratory of Regional Analysis and Remote Sensing - University of Buenos Aires** / Boss: Azuleta Maria Eugenia (Coordinator)

Year 01/02/2023 – 30/04/2023 – Buenos Aires, Argentina

I developed algorithms for cloud masking over water bodies and extract information with MODIS, for the development of machine learning models focused on water quality, in the project "Automated algorithms for spatiotemporal prediction of toxic bloom-mediated water quality in systems of relevance to drinking water and recreation".

- **Internship, ILLA-Maeci intern, EOSIAL - Sapienza Università di Roma** / Boss: Giovani Laneve

Year 01/05/2023 In Progress

A deforestation monitoring system will be developed through the continuous change detection technique (CCDC), applying the pure forest index (PFI), through Google Earth Engine and Python.

## EDUCATION



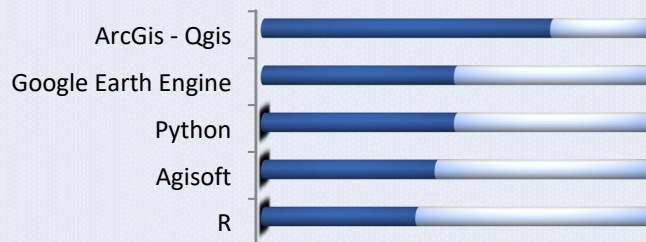
**Geographic and Environmental Engineer, Universidad De Ciencias Aplicadas Y Ambientales** / Year Graduation: 2020 – Bogotá, Colombia

- **Specialization in remote sensing and GIS applied to the study of natural resources and agricultural production, Universidad De Bueno Aires** / Subjects completed awaiting grade
- **Intern in Master's in Spatial Information Applications., Comisión Nacional de Actividades Espaciales Argentina** / In progress
- **English level: B1**

## Courses and seminars

- **Mapping and Monitoring of Forests with SAR Data, NASA** / Year 2020
- **Practical tools for land use planning, Colombian Federation of Municipalities** / Year 2020
- **The Use of Solar-Induced Fluorescence and LIDAR to Assess Vegetation Change and Vulnerability, NASA** / Year 2021
- **Remote sensing as an environmental management tool, Institute "MARIO GULICH"** / Year 2021

## SKILLS



## CONFERENCES AND ARTICLES



**7° International Geomatics Week 2017 IGAC** / Year 18/08/2017

*Unmanned flights and participatory mapping, a tool for spatial organization: Case study of the Tikuna indigenous community of San Martín de Amacayacu, Amazonas-Colombia* - [Link..](#)

**III International Seminar: State, Territory and Development Pilot University** / Year 24/09/2019

*Proposal for a line of community territorial planning based on a participatory mapping exercise and the use of unmanned flights. In the Tikuna indigenous community of San Martín de Amacayacu, Amazonas-Colombia.*

**II International Congress of Young Researchers ScienceTubers** / Year 20/05/2020

*Analysis of the urban heat island at the canopy level for the city of Bogotá Colombia 1981-2015 - [https://www.youtube.com/watch?v=A272\\_-28x9g](https://www.youtube.com/watch?v=A272_-28x9g)*

**Digital geographic magazine UNNE** / Year 20/05/2020

*Indications of global warming in average and minimum temperatures for the city of Bogotá, Colombia 1981-2015 - DOI: <http://dx.doi.org/10.30972/geo.17344421>*