



# RUBIERE RAMIREZ

Geospatial Developer | Spatial Data Engineer

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## SUMMARY

A geospatial specialist and a spatial data engineer with over six years of experience in proprietary geographic information systems (GIS), free and open-source GIS, spatial data programming, spatial database management, remote sensing, earth observation, and spatial data engineering.

## EXPERIENCE



### Geographic Information Systems Assistant, Statistical Institute of Belize

 September 2022 – Present  Belmopan, Belize

Administer and maintain Enterprise GIS, spatial databases, services, Web GIS applications and perform earth observation on the built environment.

- Develop, administer and maintain spatial databases on PostgreSQL database with PostGIS extension.
- Develop, administer and maintain web applications on free and open-source software for geospatial (FOSS4G): GeoServer & Mapstore2; and on commercial off-the-shelf (COTS) software: Portal for ArcGIS & ArcGIS Server, Oracle Application Express.
- Create Sentinel-2 Geomedian of Belize with Google Earth Engine and classify urban areas with machine learning in Python.
- Develop tools to automate tasks and to standardize the extraction, transformation and loading of non-spatial data and spatial data into SIB's spatial data repositories with SQL, R, and Python.

### Geographic Information Systems Technician, Statistical Institute of Belize

 July 2018 – September 2022  Belmopan, Belize

Create spatial data using front-end geospatial software and produce maps.

- Heads-up digitized building footprints for the entire country of Belize.
- Perform remote sensing techniques to detect changes in urban areas in QGIS.
- Process aerial photos from drone imagery in QGIS and ArcGIS Pro.

### Geographic Information Systems Technician, Coastal Zone Management Authority and Institute of Belize

 May 2017 – June 2017  Belize City, Belize

Assist CZMAI with data creation and field data collection.

- Heads-up digitized and updated building footprints for Caye Caulker using Google Earth Pro and existing building footprints.
- Assisted with the collection of land use and building information in Caye Caulker using Open Data Kit for android devices.

## EDUCATION

### MSc in Geographical Information Science and Systems (In Progress) Paris Lodron University of Salzburg

 2026  Salzburg, Austria

### BSc in Natural Resource Management University of Belize

 2014  Belmopan, Belize

## SKILLS

R | R-Spatial | Python | GeoPython | SQL | Spatial SQL | QGIS | ArcGIS Pro | Geographic Data Science | Data Engineering | Remote Sensing | Earth Observation | PostgreSQL PostGIS | FOSS4G GeoServer | Geovisualization and Geocommunication | Web GIS

## ACHIEVEMENTS

✓ **Enterprise GIS in FOSS4G**  
Developed and implemented an Enterprise GIS infrastructure with free and open-source software for geospatial: QGIS and PostgreSQL Database with PostGIS extension.

✓ **Web GIS in FOSS4G**  
Deployed and maintained Open-Source GeoServer and Mapstore2 with Apache Tomcat on Apache HTTP Server on SIB's GIS Servers.

✓ **GIS Web Application for Census Progress Tracking**  
Geovisualized census progress coverage by creating a web application using open standards: Mapstore2 web app created using GeoServer, PostgreSQL database with PostGIS extension and ETL process automated with R programming.

✓ **Created {rvr2spatial}**  
A package in R programming designed to facilitate the ETL process from MariaDB to PostgreSQL PostGIS.

✓ **Created MariaDB to QGIS**  
QGIS Python Plugin that fetches longitude (x) and latitude (y) data from MariaDB and writes it to a shapefile or geopackage and adds it to map canvas.