



Karla Gabriela Freire Quintanilla

PROFESSIONAL PROFILE

Karla Freire Quintanilla was born in the city of Riobamba, Ecuador. She obtained a degree in Geographic and Environmental Engineering from the Universidad de las Fuerzas Armadas (ESPE), Ecuador, in 2014. In 2017 she started in the postgraduate program of Master in Geomatics Engineering and Geoinformation at the Polytechnic University of Valencia, Spain. Her thesis focused on the Estimation of live fuel moisture using Sentinel-2 imagery in forest plots in the Valencian Community. She has professional experience in the field of Geography from various disciplines such as in the field of the study of natural hazards, land use planning, remote sensing, geographic information systems (GIS), geology and others in the field.

Gualberto Perez S16-151 and
Guillermo Jones, Quito, 170805



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PERSONAL INFORMATION

-  Marital Status: Married
-  Ecuatorian nationality
-  Place and date of birth:
Riobamba, November 2,
1990

EDUCATION AND FORMATION

UNIVERSITY MASTER'S DEGREE IN GEOMATICAL ENGINEERING AND GEOINFORMATION

- Fourth Level Studies: Polytechnic University of Valencia – UPV - Spain

GEOGRAPHIC AND ENVIRONMENTAL ENGINEER

- Third Level Studies: Universidad de las Fuerzas Armadas - ESPE - Ecuador

PRE PROFESSIONAL PRACTICES

- INSTITUTO ESPACIAL ECUATORIANO-IEE
- “SCIENTIFIC RESEARCH AND TECHNOLOGICAL DEVELOPMENT CENTER”
- MINISTERIO DE AGRICULTURA, GANADERIA, ACUICULTURA Y PESCA – MAGAP
- MINISTERIO DEL AMBIENTE – MAE



Karla Gabriela Freire Quintanilla

EXPERIENCE

RESEARCHER AND PROFESSOR IN THE SCHOOL OF EARTH SCIENCES, ENERGY AND ENVIRONMENT

YACHAY EXPERIMENTAL TECHNOLOGY RESEARCH UNIVERSITY | November 2021 - currently

- Planning, investigation, teaching, organization of learning, practice and evaluation.

ASSISTANT PROFESSOR

Technical University of the North – UTN| April 2019 – November 2021

- Linear Algebra classes in the mechatronics career.

PETROECUADOR WORK ORDERS PROJECT SUPERVISOR

AOC Engineering| February 2021 – September 2021

- Topographic monitoring with vertical control through geometric leveling, geodetic network for deformation control, topographic monitoring through total station, infrastructure scanning for structural deformation control, flights with RPAs.
- Topographic surveys and volume measurement through RPAs.
- Fixed Wing Drone Flights.
- Precision GNSS survey.
- Monitoring of spills by means of Remote Sensing through satellite images.

GEOGRAPHER OF THE TERRITORIAL PLANNING MANAGEMENT DIRECTORATE

Decentralized Autonomous Government of Riobamba| September 2019 – February 2021

- Territorial Management and Planning with a geospatial approach for decision-making in sustainable development.
- Generation of Urban and Rural Territorial Zoning.
- Review and drafting of Strategic Territorial Development Plans

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LANGUAGES

SPANISH | Native
ENGLISH | Intermediate



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EXPERIENCE

- Satellite monitoring of the urban growth of the Canton
- GIS developer of the Riobamba Canton Geoportal
- Topographic surveys with GNSS precision equipment and total station.
- Generation and updating of orthophotography of the Canton through RPAs and processing of aerial photographs.

TERRITORIAL PLANNING ANALYST

Decentralized Autonomous Government of Riobamba | February 2016 - August 2017

- Urban Code Generation (PDOT and PUGS)
- Training of Rural and Urban Territorial Promoters
- Generation of base cartography according to the IGM Object Catalog (1:1000 – 1:5000)
- Digitization and structuring of basic and alphanumeric cartographic information.
- Compilation of thematic and cadastral cartographic information.
- Supervision and review of geoinformation delivered and generated by consultants.

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PROFESSIONAL SKILLS

- Management of the Office package
- Writing and editing texts and reports
- Management of Geographic Information Systems

GEOMATIC SPECIALIST II

Ecuadorian Space Institute – IEE “SCIENTIFIC RESEARCH AND TECHNOLOGICAL DEVELOPMENT CENTER” | August 2015 - January 2016

Research project "Landscape Zoning of the National Project (1:5000)".

- Generation of cartography based on the catalog of objects.
- Digital interpretation of aerial photographs.
- Generation of executive reports.
- Field trips to collect and validate information as required by the institution.
- Various activities corresponding to the Geomatic Specialist.



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EXPERIENCE

GEOGRAPHICAL DEPARTMENT TECHNIQUE

ECOLEX Environmental Law and Management Corporation | November 2014 - June 2015

- General cartographic production according to the demand of the organization and current projects and partners.
- Field trips to collect and validate information.
- Digitize, homogenize and structure cartographic and alphanumeric information.
- Compile thematic cartographic information.

PUBLICATIONS AND PAPERS

VEHÍCULOS AÉREOS NO TRIPULADOS EN EL ANÁLISIS Y MONITOREO DE EVENTOS ADVERSOS EN LA ZONA CENTRO DE LA CUENCA DEL RÍO PAUTE, ECUADOR

XVII Coloquio Ibérico de Geografía. Nuevas fronteras y nuevos horizontes en la Geografía Ibérica: políticas y transformaciones territoriales. Libro de Actas, Páginas 312-331.

(<https://coloquioiberico2020.usal.es/es/>)

ESTIMATION OF THE HUMIDITY OF THE LIVE FUEL USING SENTINEL-2 IMAGES IN FORESTRY PLOTS OF THE VALENCIAN COMMUNITY.

Speaker at the Geospatial Symposium 2019 (CEPEIGE-ESPE) | October 03 and 04, 2019 (Duration 16 hours)

(<https://journal.espe.edu.ec/ojs/index.php/revista-geospatial/article/view/1494>)

IMPLEMENTATION OF GEOPORTAL FOR THE GEOGRAPHICAL CENTER OF THE CAREER OF GEOGRAPHICAL AND ENVIRONMENTAL ENGINEERING USING THE ARCIMS SOFTWARE.

Author of the scientific article belonging to the third level degree project

(<http://repositorio.espe.edu.ec/handle/21000/5319/browse?type=author&order=ASC&rpp=20&value=Freire+Quintanilla%2C+Karla+Gabriela>)

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PERSONAL SKILLS

- Punctual
- Responsible
- Organizational
- Fast learning
- Persistent



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COMPETENCES AND SKILLS

- Geographic Information Systems: ArcGIS Desktop, ArcGIS Online, ArcGIS Pro, QGIS, GvSIG.
- Programming languages: PYTHON, R, PostgreSQL, PostGIS, HTML, JAVA.
- Image processing: Pix4D, Agisoft PhotoScan, ERDAS, IDRISI SELVA, ILWIS, ENVI.
- Data geoprocessing: LeicaGeooffice, Trimble, SGO.
- Other software: WEKA, FUSION, MicroStation, Surfer, AutoCAD, Radan7, Revit AutoDesk, Blender, DroneDeploy.
- Management and use of: Total station, Level, GPS, GNSS, Laser scanner, Georadar, Drone/UAV.
- Statistical software: SPSS, Statgraphics.
- Pilot certified by the DGAC of unmanned aircraft RPAs.

COURSES AND TRAINING (last 5 years)

Climate change and land use planning expert

- Azuay University – IERSE | 22/11/2021-08/04/2022

Geodetic networks and GPS

- Pan American Center for Geographic Studies and Research – CEPEIGE | 05/10/2021-05/28/2021

Theoretical - practical training for the operation of unmanned aircraft RPAs

- Hobby Store | 04/12/2021 -04/17/2021
- Authorization by the DGAC with No. DGAC-DGAC-2021-0308-O

WEBMAPPING Application Development

- MappingGIS | 09/10/2020-10/14/2020

Cadastral Management with GIS applications

- Pan American Center for Geographic Studies and Research – CEPEIGE | 08/03/2020-08/21/2020

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EXTRA INFORMATION



Driving license | Type B
license



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COURSES AND TRAINING (last 5 years)

Use and handling of the WINQUAD 5 vertical takeoff and landing unmanned aircraft and processing of aerial photographs for the generation of orthophotos

- Descartes Engineering Company DKART CA | 07/23/2020-07/25/2020

Urban equipment

- Development Bank of Ecuador (BDE) | 06/02/2020-06/29/2020

Land Registry Management

- Development Bank of Ecuador (BDE) | 06/02/2020-06/29/2020

Introduction to ENVI Analytics

- Geospace Solution – L3HARRIS | 04/13/2020-04/17/2020

Use and management of Total Stations, handheld GPS, dual-frequency GNSS partner and start-up of a Continuous Monitoring Station

- Descartes Engineering Company DKART CA | 02/10/2020, 03/12/2020 – 03/13/2020

Use and application of drones

- CORFOPYM Engineering DRONES | 01/23/2020

Planning and Territorial Development with emphasis on the PDOT, PUGS and Public Finances for GAD

- Development Bank of Ecuador (BDE) – Technical University of Ambato | 07/11/2019-08/11/2019

GvSIG desktop applied to the environment

- Polytechnic University of Valencia | 10/26/2018

GvSIG desktop applied to agriculture

- Polytechnic University of Valencia | 10/24/2018

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COURSES AND TRAINING (last 5 years)

14th gvSIG International Conference. Economy and Productivity

- gvSIG Association | 10/24/2018 – 10/26/2018

Skills to improve employability-Ed.29

Polytechnic University of Valencia | 02/20/2018 – 03/13/2018

13th gvSIG International Conference. Geolocating ICT

- gvSIG Association | 10/18/2017 – 10/20/2017

Drone pilot course

- Aerial Videos | 08/17/2017-08/18/2017

Introduction to the use and representation of geospatial information

- CENTROGEO | 12/15/2016

Introduction to Using and Editing OPENSTREETMAP

- The National Section of Ecuador of the PAIGH and the Military Geographic Institute | 07/01/2015

Geospatial Information Modeling

- Pan American Center for Geographic Studies and Research – CEPEIGE | 01/27/2014-01/31/2014

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REFERENCES

- **PROFESSIONAL**

Arch. Gabriela Luna Machado
Coordinator of the Territorial Planning Management Directorate
0995851812
gluna.arq@gmail.com

- **UNIVERSITY**

Mr. Oswaldo Padilla Almeida
GIS teacher at the University of the Armed Forces - ESPE
0984321070
ov.padilla@espe.edu.ec

- **STAFF**

Ing. Pablo Francisco Portero E.
DKART General Manager
0994954690
panchoportero@hotmail.com

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