

# CURRICULUM VITAE

## PERSONAL INFORMATION

Name XAVIER, Buenanio Guerra  
Address Corunia Av.  
Quito, Ecuador  
Telephone +593-978693678  
E-Mail dr.x.buenanio@gmail.com  
Nationality Ecuadorian - Passport:1713205142



## PROFESSION

- ▷ Period May 2023–Dec 2023
  - Employer **OPS, GIZ**
  - Position Data Science Consultant
  - Main responsibilities Data cleaning, Automatic reporting, Research publications.
- ▷ Period Jan 2022–Apr 2023
  - Employer **FAO**
  - Position National Coordinator Consultant/National MRV
  - Main responsibilities Climate change national policy formulation, Budget execution and Technical activities follow up, Proposals preparation (UK Pact, NAMA Facility), Workshops Facilitator, Coordination with National Designed Authority and stakeholders (public and private), Progress reports to Green Climate Fund.
- ▷ Period July-Aug 2022
  - Employer **Universidad Central del Ecuador**
  - Position Professor Climate Risks Module
  - Main responsibilities Cases studies and climate risks sectoral methodologies explanation. This was the last module of Climate change and Water Resources master's degree, first promotion. Contribution in the design of this master program.
- ▷ Period May 2018–Nov 2022
  - Employer **UNDP**
  - Position Environmental Specialist - Coordinator NDC-SP
  - Main responsibilities Modelling of mitigation initiatives for the Nationally Determined Contribution (NDC) of Ecuador. GHG Inventories, Climate risks sectoral methodologies, MRV design and implementation (Mitigation and Adaptation), Ecuador's Zero Carbon Program support, Private Engagement Initiative (Carbon Footprint measurement and SBTi knowledge), Workshops organization and execution with Canvas and Lean Start-Up methodologies, Implementation Plan NDC design and follow up, Developing proposals for project continuity, Climate Business Rounds organization.
- ▷ Period July 2018–Sep 2021

- Employer
- Position
- Main responsibilities

▷ Period

- Employer
- Position
- Main responsibilities

▷ Period

- Employer
- Position
- Main responsibilities

▷ Period

- Employer
- Position
- Main responsibilities

▷ Period

- Employer

○ Position

- Main responsibilities

▷ Period

- Employer

▷ Project 2008 until 2013

- Position
- Main responsibilities

▷ May 2006–May 2007

- Position
- Main responsibilities

## **Escuela Politecnica Nacional (CEC)**

Instructor

Contents design and execution of courses: Basic Statistics, Programming Applied to Statistics with R, Econometrics with R, Programming Applied with Python, Data Mining and Machine Learning with R, Sparkylr

July 2017–Nov 2020

## **The Army Polytechnic School**

Occasional Professor

Subjects: Statistics and Experimental Design for Update Curricular program and complexion test in Sustainable Agriculture and Agro-business Master

Nov. 2017–May. 2018

## **SolGold PLC**

Environmental Specialist

Environmental monitoring: vegetation, water, soil, sediments

Sept. 2017–Jan. 2018

## **Pontificia Universidad Catolica del Ecuador**

Occasional Professor

Subject: Chemistry

Feb. 2013–May. 2017

## **The Polytechnic University of Madrid**

21 Rios Rosas, Madrid, 28003, Spain

Teaching Assistant

Hydrology, Hidrogeology, Research support, Data analysis: univariate and multivariate (clustering), Regression modelling (including spatio-temporal data), Data mining, Network analysis, Spatial data analysis and Geostatistics, Text Mining, Visualization and reporting (data literacy and dashboards): ggplot2, shiny, R Markdown, D3.js with plotly, Google Analytics; Materials characterization (XRD, XRF, ICP, AAS, UV-VIS), materials leaching assays.

May 2007–Jan. 2013

## **Aurelian Ecuador S.A. (Kinross Gold Corporation)**

N37-29 Amazonas, Quito, 170507, Ecuador

"Fruta del Norte" Project

Environmental Coordinator - Deputy Manager

Environment, Health and Safety Reports to Authority, Evacuation and Contingency Plans, Monitoring and Follow-up HES Management Plans, Training; Field work, Management and analysis of geological databases (2007-2008) with ARCGIS and Mapinfo. Spatial data analysis

## **Care International, Maquipucuna Foundation, IADB, MAGAP**

Individual consultant

Thematic cartography (land use and land cover, natural hazards), GIS, remote sensing, spatial modelling

- ▷ 2007
  - Position
  - Main responsibilities
  
- ▷ May 2003–May 2006
  - Position
  - Main responsibilities
  
- ▷ May 2002–May 2003
  - Position
  - Main responsibilities

## EDUCATION

- ▷ Period
  - Acquired qualifications
  - Institute
  - Principal subjects
  - Minor subjects
  - Grade
  
- ▷ Period
  - Acquired qualifications
  - Institute
  - Principal subjects
  - Minor subjects
  - Grade
  
- ▷ Period
  - Acquired qualifications
  - Institute
  
- ▷ Period
  - Acquired qualifications
  - Institute

### **Ecuador National Cartography Institute (IGM)**

Rural cadaster Technician

Land use assessment, thematic cartography including natural hazards and risks

### **Pichincha Local Government, Quito**

GIS Technician

GIS management and implementation; Natural hazards and risks maps: earthquakes, volcanic, inundations. Flooding simulations, watershed modelling, stakeholders mapping

### **Maquipucuna Foundation**

Technician

Land cover and land use change in Choco-Andean Corridor with Idrisi (GEOMOD) and ESRI products

2013-2017

### **PhD in Research, Modelling and Analysis of Environmental Risks**

The Polytechnic University of Madrid, School of Mines and Energy

Acid Rock Drainage Water Treatment with Zeolitic Tuffs, Mining, Hidrology

Geophysics, Geochemistry, Geology, GIS, Data analysis  
Cum laude

2013-2014

### **MSc. in Environmental Risks**

The Polytechnic University of Madrid, School of Mines and Energy

Contaminants partition, Environmental Risks, Data analysis, Geochemistry

Soil Contamination Treatments  
Average grade 8

2010

### **Dipl. in Health and Safety**

The San Francisco de Quito University

2004-2007

### **MSc. in Environmental Management**

The San Francisco de Quito University

1997-2002

### **Bachelor of Geographic and Environmental Engineering**

The Army Polytechnic School

## RESEARCH

### ▷ TRAINING

- ▷ Projects Budget Holder (FAO, 16-10-2022)
- ▷ Environmental and Social Risks: Standards and Procedures (FAO, 15-10-2022)
- ▷ BSAFE (FAO, 27-02-2022)
- ▷ Long-term strategies for climate change and M3E model (Spanish Climate Change Office, Madrid, 06-11-2019)
- ▷ Greenhouse Gas Abatement Cost Model (GACMO) (UNEP-DTU, Quito, 12-07-2018)
- ▷ Experiential learning (UPM, Madrid, 19-04-2018)
- ▷ XXXIX International Summer School: Earth Sciences, Environmental Geology and Geochemistry, Contamination and Soils restoration (UPM, Madrid, 19-04-2018)
- ▷ Introduction to data analysis and Big Data (URJC, Madrid, 2016)
- ▷ Multivariate analysis with R (UAM, Madrid, 2015)
- ▷ 77 EAGE Conference and Exhibition, Earth Science for Energy and Environment (European Association of Geoscientists and Engineers (EAGE), Madrid, 15-06-2015)
- ▷ I Expo-World Convention in Mining, Energy y Metallurgy (Oviedo University, 2015)
- ▷ Geostatistics and Spatial data analysis with R (UPM Madrid, 2014)
- ▷ GEOMOD: Land use change in Idrisi and ARCGIS (Winrock International, Quito, 15-10-2002)

## PUBLICATIONS

### ▷ Publication

Mesa, J., Chicaiza, E., Buenano, X., et.al. (2018). *Analysis of Users and Uses of DEMs in Spain*. DOI: 10.3390/ijgi6120406, 6(12), 406. ISPRS INTERNATIONAL JOURNAL OF GEO-INFORMATION

### ▷ Publication

Leiva, C., Araujo, N., Buenano, X. (2017). *Modelo de prediccion espacial de ondulacion geoidal, para el area urbana de Quito, utilizando tecnicas geoes-tadisticas*. DOI: <http://geoespacial.espe.edu.ec/wp-content/uploads/2017/01/Geoespacial14.1.pdf>. 14/1: 83 - 102. Revista Geoespacial

- ▷ Publication Ariza, F., Chicaiza, E., Buenano, X. (2017). *Metodos de evaluacion de la calidad posicional en Hispanoamerica, analisis de la situacion*. Revista Cartografica IPGH 94
- ▷ Publication Chicaiza, E., Leiva, C., Arranz, J.J, Buenanio, X. (2017). *Spatial uncertainty of a geoid undulation model in Guayaquil, Ecuador*. Open Geosciences.
- ▷ Publication Buenanio, X., et.al. (2017). *Zeolitic tuffs for acid mine drainage (AMD) treatment in Ecuador: breakthrough curves for Mn<sup>2+</sup>, Cd<sup>2+</sup>, Cr<sup>3+</sup>, Zn<sup>2+</sup>, and Al<sup>3+</sup>*. Environmental Science and Pollution Research, 1-13.
- ▷ Publication Mesa J, Chicaiza E, Buenanio X, et.al. *Analisis de los usuarios y usos de los MDE en Espania*. Geofocus, N.17, 2016
- ▷ Publication Chicaiza E, Buenanio X. *Modelling uncertainty using geostatistics, a case study in Ecuador* Conference Proceedings, Spatial Accuracy 2016, Montpellier, France. ISBN: 978-2-9105-4510-5
- ▷ Publication Buenanio X, et.al. *Guidelines of Natural Zeolites Characterization for Acid Mine Drainage Treatment. Case Study Guayaquil, Ecuador* Conference Proceedings, SPAINMinergy, Gijon, 2015
- ▷ Publication Buenanio X, Chicaiza E. *Prediction with Geostatistics (in free software) of Aluminum soil concentrations in a forest in south-east of Ecuador* 77th Conference Proceedings, European Association of Geoscientists and Engineers, Madrid, 2015

## LANGUAGES

FIRST LANGUAGE  
OTHER LANGUAGES

**Spanish**  
**English** – Reading: High, Writing: High, Speaking: High