Jorge Ruiz Cabrejos

Barcelona, Spain

Health data scientist with 9 years of experience working in statistical analysis, data management and the application of information technologies, mainly on academic research and public health projects of different scales and scopes. Proficient in R, Python, QGis, and other data manipulation and emergent collection tools (both as software and as hardware) applying them in complex database systems, genomic and diagnostic data, spatial imagery, census surveys, among others.

Education

Oct.2024 – Present
Barcelona, Spain.

Universitat Pompeu Fabra (UPF)
(PhD.) Doctorate / <u>Biomedicine</u>

Sept.2020 – Dec.2022
London, UK.

London School of Hygiene and Tropical Medicine (LSHTM)
(Msc.) Master of Science / <u>Health Data Science</u>

Mar.2014 – Dec.2018
Lima, Perú.

Universidad Peruana Cayetano Heredia (UPCH)
(Bch.) Bachellor / <u>Health Administration</u>

Professional Experience

May.2024 – Present
Barcelona, Spain.

Barcelona Institute for Global Health (ISGlobal)
Climate Change Adaptation group
- <u>Predoctoral Researcher</u>
  - Epidemiological models in temperature related mortality.
- <u>Software Engineer</u>
  - Implementation of harmonization protocols, data integration, and development of database procedures.

Apr.2020 – Apr.2024
Lima, Perú.

Instituto de Medicina Tropical Alexander von Humboldt (IMTVAH)
Laboratorio de Innovación en Salud [Health Innovation Laboratory]
- <u>Data Scientist</u>
  - Developed the data collection plan and prepared statistical analysis for the DSMB on clinical trials.
  - Designed statistical models for health-related data. Descriptive statistics, multivariable analysis, machine learning, Bayesian modelling, among others (dashboards, programming functions, automatized reports)
- <u>Research Assistant</u>
  - Contributed towards the scientific production of the group by publishing in high-impact journals.
  - Produced training material and standardized documentation for common data procedures.

Jan.2017 – Mar.2020
Lima, Perú.

Universidad Peruana Cayetano Heredia (UPCH)
Laboratorio de Malaria [Malaria Laboratory]
- <u>Research Assistant</u>
  - Responsible for the data management, collection, processing, and analysis required by the different projects part of the International Center of Excellence for Research in Malaria - Amazonia (ICEMR).
  - Monitor the quality of the data produced and coordinate its use, transfer, and governance policies.
  - Conducted data analysis on administrative and scientific data produced by the different projects on leptospirosis surveillance, malaria spatial epidemiology and human mobility.
  - Data wrangling, data mining, and aerial imagery collection and procedures.

Aug.2016 – Apr.2018[1]
Lima, Perú.

Proyecto: Mamás del Rio
- [1]Data Coordinator
  - Implemented ODK mobile systems and provided training to community health workers in the use of electronic devices to enhance maternal and child health.

Sep.2017 – Dec.2017
Lima, Perú.

Ministerio de Salud
Dirección de Monitoreo y Evaluación de la Gestión en Salud
- Data Consultant
  - Implementation of the data collection and analysis of the project "Termómetro Salud", a health facility survey to collect KPIs and other health center specific data.

Aug.2016 – Nov.2016
Lima, Perú.

Ministerio de Salud
Despacho Viceministerial de Salud Pública
- Data Consultant
  - Development of an application and surveyor training for the data collection system of the National Campaign for Vaccination Against Yellow Fever of the Ministry of Health, held in the region of Junín, Perú.

Academic activities

- Conference presentations

(Oct 2024 New Orleans, USA.) **American Society of Tropical Medicine and Hygiene (ASTMH)**
Oral Presentation: Advancing Malaria Elimination Assessment in Loreto, Peru through the Freedom from Infection Model

- Teaching roles

Colegio de La Inmaculada, Jesuitas
Lecturer *(Lima, Perú)*
- "Computer Science"
3rd of secondary (Mar.2019 – Dec.2019)
- "Game design and development"
3rd of secondary (Mar.2017 – Dec.2017)
- "Civic Education"
4th of secondary (Mar.2015 – Dec.2015)

Universidad Peruana Cayetano Heredia
Assistant professor
- "Introduction to data management and visualization in R"
(Jun.2018 – Aug.2018)
- "Basics of statistics applied with R".
(Jan.2018 – Mar.2018)
- "Introduction to statistics with R"
(Jul.2017 – Sep.2017)
- "Society, Culture and Health Organizations"
(Aug.2016 – Dec.2016)

- Workshops and talks

Apr.2019 Assistant – Bioinformatics Resource for Invertebrate Vectors of Human Pathogens (VectorBase) Hands-on Workshop, Iquitos, Perú

Feb.2019 Lecturer – "Advanced tools with R" XVI Teorical pratice course of molecular epidemiology applied to infectious diseases – Postgraduate school - Universidad Peruana Cayetano Heredia (UPCH)

Nov.2018 Moderator - Colloquium "Role and challenges of the health administrator in public management" - Facultad de Salud Pública y Administración, Universidad Peruana Cayetano Heredia (UPCH)

Feb.2017 Speaker - I Meeting of Telehealth and Mobile Health for the care of people

Oct.2016 Assistant – Seminar "Tools for decisión-making in the direction and management of health services" - Universidad de Piura

Publications

Stresman G, Nelli L, Wu L, Byrne I, Surendra H, Fernandez-Camacho B, **Ruiz-Cabrejos J**, et al. Evidence-based decision-making for malaria elimination: Applying the Freedom From Infection statistical framework in five malaria eliminating countries. Pre-print.

Fernandez-Camacho, B., Peña-Calero, B., Guillermo-Roman, **Ruiz-Cabrejos J**, M. et al. Malaria seroepidemiology in very low transmission settings in the Peruvian Amazon. Sci Rep 14, 2806 (2024). https://doi.org/10.1038/s41598-024-52239-5

Navarro, R., Paredes, J.L., Tucto, L. Medina C, Angles-Yanqui E, Nario JC**, Ruiz-Cabrejos J**, et al. Bovine lactoferrin for the prevention of COVID-19 infection in health care personnel: a double-blinded randomized clinical trial (LF-COVID). Biometals (2022). https://doi.org/10.1007/s10534-022-00477-3

Carrasco-Escobar G, Matta-Chuquisapon J, Manrique E, **Ruiz-Cabrejos J**, et al. 2022. Quantifying the effect of human population mobility on malaria risk in the Peruvian Amazon, R. Soc. open sci.9211611211611

Gianella C**, Ruiz-Cabrejos J**, et al. Reverting five years of progress: Impact of COVID-19 on maternal mortality in Peru. Bergen: Chr. Michelsen Institute (CMI Brief no. 2021:1) 4 p. https://www.cmi.no/publications/7445-reverting-five-years-of-progress-impact-of-covid-19-on-maternal-mortality-in-peru

Carrasco-Escobar G, Fornace K, Wong D, Padilla-Huamantinco PG., Saldaña-Lopez Jose A., Castillo-Meza Ober E., Caballero-Andrade Armando E., Manrique E, **Ruiz-Cabrejos Jorge**, et al. 2020. Open-Source 3D Printable GPS Tracker to Characterize the Role of Human Population Movement on Malaria Epidemiology in River Networks: A Proof-of-Concept Study in the Peruvian Amazon. Frontiers in Public Health DOI: 10.3389/fpubh.2020.526468

Carrasco-Escobar G, Manrique E, **Ruiz-Cabrejos J**, et al. 2019. High-accuracy detection of malaria vector larval habitats using drone-based multispectral imagery. PLOS Neglected Tropical Diseases 13:e0007105. DOI: 10.1371/journal.pntd.0007105.

Carrasco-Escobar G, Castro MC, Barboza JL, **Ruiz-Cabrejos J**, et al. 2019. Use of open mobile mapping tool to assess human mobility traceability in rural offline populations with contrasting malaria dynamics. PeerJ 6:e6298. DOI: 10.7717/peerj.6298

M Lazo, M Valderrama, J Perez, J Garcia, **J Ruiz-Cabrejos**, et al. Strengthening Peruvian Immunization Records through Mobile Data Collection Using the ODK App. [Artículo], Global Inmunization News (GIN). Diciembre 2016

Languages

SPANISH	Native Speaker
ENGLISH	Level C1. Cambridge Certificate in Advance English (CAE)

Skills

Applications.

MS Office:	Advanced
XLSForms / RedCap/ CommCare:	Advanced
DJI Drone operator:	Advanced
Git:	Advanced
HTML:	Intermediate
Bash / Linux	Basic

Statistics and Data Software.

R / (R)markdown / R Shiny:	Advanced
Python:	Advanced
SQL / GraphQL:	Advanced
SPSS / STATA:	Intermediate
SAS:	Basic

Geographical and Viz Software.

Ggplot2 / Plotly:	Advanced
QGis:	Advanced
Power BI / Tableau:	Intermediate