Romy Rodríguez-Ravines, PhD

Connecting People and Possibilities Through Data Science

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About me

I transform vast volumes of data into actionable insights that drive strategic decisions. Where others see raw megabytes, I see intelligence. With over 25 years of experience in applied data science, I design solutions for complex business challenges and maximize AI investments.

My track record spans multiple sectors, including cybersecurity, industrial operations, marketing, financial services, telecommunications, energy, and client intelligence. Recently, I led the development of a cyber risk quantification engine for a SaaS product serving industrial infrastructures and OT networks.

Holding a Ph.D. in Statistics, I combine rigorous academic training with hands-on leadership across public and private sectors in Spain, Brazil, and Peru. Fluent in Spanish, English, and Portuguese, I am recognized for building high-performing teams and fostering innovation that delivers measurable business impact.

Education

Ph.D. in Statistics
UFRJ. Rio de Janeiro, Brazil *2003–2006*
CNPq. Academic Scholarship (4-year financial aid)

M.Sc. in Statistics
UFRJ. Rio de Janeiro, Brazil *2001–2003*
CAPES Academic Scholarship (2-year financial aid)

M.Sc. in Systems Engineering
UNI. Lima, Peru *1994–1997*

B.Sc. in Statistics
UNALM. Lima, Peru *1989–1994*
Ranked second in graduating class (Class of 1994)

Professional Experience

DeNexus
Madrid, 03/2021 – 10/2025
Head of Research and Modeling Strategies
Defined and executed modeling strategies powering DeRISK, a SaaS platform for cyber risk quantification in ICS/OT environments, led PhD-level team and cross-functional collaboration with cybersecurity experts, software engineering, and product management teams.

Avanade
Madrid, 09/2019 – 06/2020
Group Manager of Advanced Analytics
Designed AI/ML solutions to drive business value across sectors; led initiatives in knowledge mining, text analytics, and MLOps using Microsoft technologies.

Innova-tsn
Madrid, 10/2017 – 08/2019
Senior Manager of Advanced Analytics
Go-to expert for data science teams in Spain and UK; delivered ML solutions and designed presales technical proposals and POCs. Led initiatives in text analytics, demand forecasting, and predictive modeling, while fostering team growth and innovation.

Bayes Forecast
Madrid, 02/2008 – 09/2017
Chief Knowledge Officer
Held strategic roles including Chief Knowledge Officer, Pre-Sales Director, and Production Department Sub-Director. Led global analytics projects and teams in Spain, Brazil, Mexico. designed forecasting systems and predictive models. Designed forecasting systems and predictive solutions, directed presales efforts, crafted technical proposals, and executed POCs.

International Organizations *Lima, 01/2001 – 12/2007*
Short-term Consultant in Statistics - Public Sector
United Nations (FAO, UNDP), BID, World Bank, EU-AN Cooperation Project on Statistics (ANDESTAD). Peruvian Government: National Institute of Statistics (INEI), Ministry of Agriculture (SENASA), Ministry of Education (MINED).

Academic & Research Roles

Part-time Professor

Alfonso X El Sabio University *2024–Now*
BD in Business Analytics and
BD in Computing and Artificial Intelligence

Nebrija University *2020–2023*
BD in Economics and International Business

University of Alcalá *2016–2017*
MD in Business Analytics and Big Data

EAE Business School *2017–2017*
MD in Business Intelligence and Technology Innovation

University of Rio de Janeiro (UFRJ) *2001–2004*
Institute of Mathematics. BD and MD

Guest Lecturer

Master in Statistics for Data Science - UC3M *2019–2023*
Master in Data Science - URJC *2017–2019*
Master in Statistics and Operations Research - UB *2014*

Pre and Postdoctoral Fellow

FIOCRUZ. National School of Public Health *2006–2007*
FAPEX and CNPq Postdoctoral Research Grants

FIOCRUZ. Programa de Mudanças Ambientais Globais e
Saúde (PMAGS) *2004–2006*

Publications

Jornadas de Investigación en Ciberseguridad *2025*
Computers & Operations Research *2014*
PLOS Neglected Tropical Diseases *2014; 2008*
Computational Statistics *2013*
Climate Research *2009*
Journal of Hydrology *2008*
Applied Stochastic Models to Business and Industry *2006*

Innovation and Technology Transfer

Dynamic Industrial Cyber Risk Modeling based on Evidence (DICYME)
DeNexus Tech and URJC - CPP2021-009025 *2022 – 2025*

Modeling of individual and aggregated cyber risk
DeNexus Tech and ICMAT, CSIC *2021 – 2022*

Research on quantitative OT cyber risk analysis
DeNexus Tech and URJC *2021 – 2022*

Actuarial study on quantifying cyber risk in critical infrastructure and evaluating cyber insurance viability
DeNexus Tech and UC3M *2021 – 2022*

Built a model to evaluate car prices in the Spanish market
Kroll Advisory, S.L. and UC3M *2021 – 2022*

Selected Talks & Posts

III Semana de la Ciberseguridad UAX (2025): "Leveraging Data and AI for Cyber Risk Management"

19 Congreso Internacional de Ciberseguridad Industrial (2022): "Modeling of Catastrophic Cyber Events in Industrial Environments. Impact on Portfolio Risk Accumulation"

III Conferencia Internacional en Procesos Estocásticos, Fenómenos Aleatorios y sus Aplicaciones (CIPEFA): "Bayesian Topic Modeling: Clustering for High-Dimensional Categorical Data applied to Text Analytics"

Big Data to Action 2018: "¿Qué es Big Data? Le preguntamos a Twitter"

Smart Data Summit 2018: "In-Scoring, Machine Learning y Big Data al servicio de la Puntuación Inteligente"

How DeNexus Leverages the Power of AI and ML in Cyber Risk Quantification and Management platform, DeRISK.

Cyber Risk Quantification and the Data Conundrum.

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I help organizations unlock the full potential of their data and analytics investments. Together, we can design tailored strategies that transform information into actionable intelligence, build data-savvy teams through hands-on training in AI and advanced data analytics, and ensure your data initiatives deliver quality and real ROI through rigorous technical audits. Every solution is customized to your goals and your team's technical level, providing expert support that drives measurable business value.

Spanish, English, Portuguese
Madrid. December, 2025.