Dr. Nicolas LE CORVEC

Lead Geospatial Data Scientist | Geologist

Bordeaux
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Geoscientist and Data Scientist with 15+ years of international experience in Earth Observation, InSAR, and AI-driven geospatial analysis. Proven track record in leading R&D, securing industrial partnerships, and delivering applied solutions for climate adaptation and risk management.

SKILLS

- ☑ **Inquisitiveness**
- ☑ **Open-mindedness**
- ☑ **Teamwork**
- ☑ **Autonomy and Adaptability**
- ☑ **Analytical and Synthetic skills**

Business skills

- Scientific Research, Teaching, Mentoring
- Geosciences, Remote Sensing
- Data Science (Machine & Deep Learning)

Computer skills

- **Programming & ML**: Python, R, SQL, NumPy, Pandas, TensorFlow, PyTorch, Scikit-Learn, XGBoost, MLflow, Keras
- **GIS & Remote Sensing**: InSAR, ArcGIS, Matlab, Comsol
- **Cloud & Tools**: Docker, GCP, FastAPI, Tableau, Illustrator, CorelDraw, Microsoft Office

Language skills

- French: Native speaker
- English: Fluent
- Spanish: Conversant

TRAINING

Graduate-level Course: Microwave Remote Sensing (GEOS 657)
University of Alaska Fairbanks
2025 — USA

Bootcamp Data Science
Le Wagon Bordeaux – Batch #1035
2022 — France

PhD in Geosciences
The University of Auckland
2009 – 2013 — New Zealand

MSc in Geosciences
Université Clermont Auvergne
2004 – 2005 — France
Vrije Universiteit Amsterdam
2003 – 2004 — The Netherlands

BSc in Earth and Life Sciences
Université de Rennes 1
2000 – 2003 — Rennes, France

AREAS OF INTEREST

- ✓ Travels: discovering local cultures in over 30+ countries
- ✓ Outdoor sports: running (marathon), trekking, sailing
- ✓ Geopolitics, Comic Books, Music (Hip-Hop, Electronica, World and Alternative)

WORK EXPERIENCE

Lead Geospatial Data Scientist

OPTIM.AIZE — Feb 2024 – Present | Bordeaux, France

I lead applied R&D projects in Earth Observation and AI, with expertise in InSAR, EO time series, and Land Surface Temperature applied to infrastructure, territories, and climate adaptation.

- **Introduced and deployed InSAR technology** within optim.aize, operationalizing EGMS data and establishing partnerships with ESA, IGN, BRGM, and MAIF.
- **Designed and coordinated projects** on shrink–swell hazards (RGA) and ground motion (*Inneauv*, *Opération Phoenix*, *Space4Insurance*), linking science with insurance and public stakeholders.
- **Co-conceived and co-led OPTIM-Green**, selected by Horizon Europe (*Space4Cities PCP*), enabling data-driven urban greening strategies through integrated analysis of heat islands, soils, and seasonal motion.
- **Developed geospatial + socio-economic integration** for rail networks (Ferrocampus) and critical infrastructure to improve resilience and risk prevention.
- **Represented the company** in scientific and territorial ecosystems (technopoles, municipalities, ministries, ESA, Horizon Europe), producing high-quality reports, posters, and conference contributions that strengthened optim.aize's positioning in environmental EO.

Independent Data Scientist

2022 - 2024 | Bordeaux, France

Delivered applied geospatial AI, teaching, and collaborative projects bridging science, industry, and civil society.

- **SatSense (UK):** Applied InSAR time-series analysis to quantify and predict ground deformation, with a focus on clay shrink–swell hazards (Aug–Dec 2023).
- **Le Wagon & Le Wagon for Business:** Instructor in Data Science, AI fundamentals, and Business Intelligence (Tableau) for students and corporate professionals (since Jan 2023).
- **CartoVégétation (FNE Île-de-France):** Automated high-resolution vegetation classification in urban areas using AI, supporting biodiversity and climate-resilient urban planning (Apr–Jul 2023).
- Omdena (volunteer): Brussels chapter: mapped ecological corridors for bats using AI. Ethiopia chapter: applied computer vision (TensorFlow) to detect coffee plant diseases (Jan–Mar 2023).

Natural Hazard Geotechnical Engineer

Cabinet ERIS — 2019 – 2022 | Libourne, France

- Conducted geological, structural, and environmental analyses of properties affected by drought-related natural disasters on behalf of insurance companies.
- Authored technical reports supporting claims, trained and supervised field technicians, and managed conflict situations with clients.
- Translated complex environmental assessments into accessible conclusions for non-specialists, improving client understanding and reducing disputes.

Researcher in Planetary Volcanology

International Universities & Institutes — 2006 – 2019 | Worldwide

- Collaborated with leading institutions including GFZ (Germany), Lunar & Planetary Institute (USA), Universidad de Colima (Mexico), LMV (France), and University of Bristol (UK).
- Investigated volcanic systems using structural geology, statistical modeling, analog and numerical simulations, and satellite remote sensing.
- Published **20+ peer-reviewed papers** (h-index 14, >900 citations), contributing to international visibility and scientific debates.
- In parallel, contributed to teaching, mentoring PhD/MSc students, and public science outreach.