

Clément Goldmann

Actually Research Engineer / Data Scientist at LSCE-CEA in Saclay. Working in Atmospheric pollution with a focus in Industry and Energy sector. I uses remote sensing and machine learning to deal with the research questions.

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Education

- 2023 **Ecole Normale Supérieure and PSL University, Paris, France**, MSc Earth and planetary sciences, environment, Machine learning, inverse methods, climate science, geomorphology, climate negotiations, biogeochemistry.
- 2022 **Universität of Bremen, Bremen, Germany**, ECORD Summer School, Summer school on coral reefs, climate change and sea-level change.
- 2020 **Ecole Normale Supérieure and Sorbonne University, Paris, France**, BSc Geoscience, Mathematical and physical foundations for geosciences, climate and oceanography.
- 2019 **Université Panthéon Sorbonne, Paris, France**, Two first year of Geography and History Bsc, Double Bsc in History and Geography with social sciences classes and territories management.

Experience

- 01/24-Actual **Data Scientist, Laboratoire des Sciences du Climat et de l'Environnement (LSCE-CEA), Saclay, France**
 - Work on pollutant emissions in India's industrial sector + coal-fired power plants using satellite images (Sentinel-2/5).
 - Development of machine learning models including computer vision to detect Brick kiln in India.
- 02/23-07/23 **Scientist Junior Intern, Axa Climate, Paris, France**
 - Use of radar satellite images (Sentinel-1) to determine the subsidence of city (Jakarta, Manila) using InSAR radar interferometry (SBAS-PS) and creation of pipelines to retrieve satellite data.
 - Parallelization of climatic factors and land-use changes to characterize subsidence, and implementation of inundation/marine submersion maps.
 - Machine learning, cloud hyperscaler (AWS), PostGis. Using APIs for climate data ERA5.
- 04/22-09/22 **Research Assistant, Ocean Institute, The University of Western Australia, Perth, Australia**
 - SResearch on the impact of coral reefs on coastal erosion mitigation by studying climatic and oceanographic parameters, including extreme events. MEI, IOD, ONI index.
 - Use of satellite images to determine the evolution of the Ningaloo Coast (CoastSat). Development of a method using GoPro to study sand ripples (photogrammetry).
- 10/21-02/22 **Coastal engineer trainee, BRGM - Observatoire de la côte de Nouvelle-Aquitaine, Pessac**
 - Development of Littoview, the coastsnap for the Aquitaine coast, knowledge of development programs in coastal communities and work in LIDAR data with the movement of sand dunes.
 - GPS fieldwork on beaches, installation of tools (Pressure, ADV, ADCP) in the Arcachon channel.
- 03/21-09/21 **Research Intern, Leibniz Centre for Tropical Marine Research, Bremen, Germany**
 - Laboratory analysis of organic matter and carbon from Southeast Asian mangroves. Mass spectrometer manipulation. Interaction of mangroves as nature-based solutions in the Blue Carbon program.
- 09/20-03/21 **Intern, BRGM, Nantes**
 - Summary work on coastal erosion / climate change in the Pays de la Loire region. Organization of a round table for coastal management (scientists, engineering firms, elected representatives, regional departments).
- 06/20-07/20 **Research Intern, ISTERre, Université Grenoble Alpes**
 - Relation between tectonics, paleo-shoreline and coral biodiversity in the Coral Triangle. Management, database cleaning and Delaunay/Voronoi triangulation.

Languages

French	Mother tongue	English	Fluent	German	Proficient
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Computers Skills

Python	Numpy, matplotlib, tensorflow, scikit-learn, pandas, géopandas, xarray, gdal, netcdf4.	Qgis/ARCGis	Dynamic atlas, spatial joins, raster transformations, area statistics.
SQL	PostGres/PostGIS.	R	Univariate and bivariate statistical analysis, machine learning.
Matlab	Coastsnap, basics functions.	Agisoft	Photogrammetry.
Others	AWS, Cloud hyperscaling, dockers.		

Skills and interests

- Tutor **Geography Tutor**, Geography tutor at Université Paris 1 Panthéon Sorbonne for bachelors students. Approximately 90 hours of support in methodology and in-depth study of courses.
- Hobbies Rugby : Competitive rugby (Federal 3). Surfing, Trekking, Hiking, Wildlife and Landscape Photography..