



Thomas Goossens

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SUMMARY

Geographer with 15+ years in environmental sciences, 8+ in GIS and spatial data science. All my work sits at the intersection of territory, climate, energy and biodiversity. Fast learner who connects domains: I dive into new contexts, understand how the system works, and build the geo/data tools that were missing.

SKILLS

GIS: PostGIS, QGIS, leaflet, OpenStreetMap, geostatistics
R Packages: tidyverse, sf, gstat, mlr, R6, Shiny, leaflet, Quarto, renv
Programming: R, Python, SQL, JavaScript, HTML/CSS, Bash
Data: PostgreSQL, TimescaleDB, KNIME
Web: Shiny, WordPress, JQuery
DevOps: Docker, Git, GitLab CI
Spoken Languages: French (native), English (fluent), Spanish (intermediate), Dutch (intermediate)

RELEVANT EXPERIENCE

- Freelance (via Smart), GIS & Data Consultant** Brussels
Geospatial and data science consulting for NGOs, startups and public sector — translating client needs into GIS databases, web maps and data tools. June 2016 – present
- Built energy monitoring platform for commercial/industrial SMEs at [Wise.Energy](#) — multiple sensor APIs, multi-site, TimescaleDB, Shiny simulation app (PV + heat pump + Belpex) used as pre-sale tool
 - Built a client-heavy PWA (no backend, privacy by design) for mileage reimbursements with geocoding/georouting at [MMWBA](#)
 - Coached and trained staff on PostGIS database design for biodiversity tracking at [Ardenne et Gaume](#)
 - Built a qualified prospect list for [Skysun](#) by cross-referencing OpenStreetMap data with the Belgian business registry
 - Trained a spatial ML model based on public data to predict real estate pricing in Brussels by statistical sector for [Idea Consult](#)
- Bruxelles Environnement, Data Scientist** Brussels
Industrialized the data pipeline producing regional energy balances reported to the European Commission. June 2020 – Apr 2024
- Built a custom ETL tool for energy balance data ingestion with auditability and reproducibility as cornerstones, given the legal value of the document
 - Modeled and mapped Brussels traffic emissions using spatial analysis techniques (GIS) on MUSTI model data
 - Contributed to the Parc Batiment project — spatial database of all Brussels-Capital Region buildings to track residential energy consumption
- Walloon Agricultural Research Centre, Geostatistician** Gembloux
Built the geostatistics module of the AGROMET platform — automated spatial workflow still in production. Apr 2017 – May 2019
- Designed and automated a spatial interpolation engine — 30 weather stations, 20 years of hourly data
 - Published [agrometeoR](#) open-source package; presented at [FOSS4G 2018](#)
- ULB Glaciology Lab, Glaciologist / Researcher** Brussels
Field research and data analysis on ice-bedrock interactions. 5 peer-reviewed publications. Sept 2008 – Oct 2015
- First-authored a paper in *The Cryosphere* on NEEM basal ice (Greenland deep-drilling)
 - Sampled sea ice in Antarctica (Scott Base, 3-month expedition) and Barrow, Alaska
 - Co-designed an ice compression testing bench; presented at EGU 2015
- Uccle Municipality, Water Management Unit Lead** Brussels
Local implementation of the regional rainwater management plan — GIS-based watershed analysis and infrastructure planning. Mar 2010 – Apr 2012
- Led stream restoration study with spatial prioritization of interventions; managed public tenders

EDUCATION

Master **Université Libre de Bruxelles (ULB), Geographical Sciences** Brussels
2007

PUBLICATIONS

First author: *A comprehensive interpretation of the NEEM basal ice build-up using a multi-parametric approach*, *The Cryosphere*, 2016.
DOI: [10.5194/tc-10-553-2016](https://doi.org/10.5194/tc-10-553-2016)

Co-author on 4 additional peer-reviewed papers in *Journal of Glaciology*, *Marine Chemistry*, and *Journal of Geophysical Research: Oceans* (2010–2014)

INTERESTS

Trail running, hiking, nature guiding, permaculture, eco-construction, music curation, digital sovereignty, open source