

Master's Internship Offer

Duration: 3 to 6 months (between September 2025 and September 2026)

Location: Civil and Geo-Environmental Engineering Laboratory (LGCgE), Cité Scientifique Campus, Villeneuve d'Ascq, France

Project Title:

A Cooperative Tool for Data Management and Knowledge Dissemination

Context

This internship is part of the European project **BONSAI** (*Boosting flood resilience in estuarine systems anticipating shifting climate zones*), funded by the **Interreg North-West Europe** program. The project aims to enhance the resilience of estuarine systems to flooding by anticipating the effects of climate change.

Internship Objectives




The intern will actively contribute to the development of a **collaborative digital platform** dedicated to data management and knowledge dissemination among project partners (research institutions, technical agencies, local stakeholders).

Main tasks may include:

- **Managing a shared database** to centralize data from different sources and partners;
- **Developing digital twins** to model and support the management of dike systems;
- **Designing interactive educational stories** to communicate scientific knowledge to the general public.

Tasks may be adjusted depending on the candidate's background and the duration of the internship.

More Information

-  Reference publication: Aljer et al., 2024 – Springer
 -  BONSAI project: <https://bonsai.nweurope.eu>
 -  SmartData2030 platform: <https://www.smartdata2030.com>
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Candidate Profile

This internship is intended for a Master's student (M1, M2 or engineer) in computer science, geomatics, engineering, information systems, or related fields.

Required skills:

- Familiarity with **Geographic Information Systems** (QGIS, ArcGIS, etc.)
 - Experience with **database management systems** (e.g., MySQL)
 - Knowledge of **programming languages**, particularly **Python** (data science, AI libraries)
 - **Web development** skills (JavaScript, Django) are a plus
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Internship Conditions

- **Duration:** 3 to 6 months (to be determined based on availability)
 - **Possibility of extension** under a fixed-term contract (CDD) for 3 to 12 months, depending on performance and funding
 - **Supervision:** Dr Ammar ALJER and BONSAI team at LGCgE – University of Lille, with close cooperation with the international partners in BONSAI
 - **Location:** Mainly in LGCgE – University of Lille, Cité Scientifique Campus, Villeneuve d'Ascq, France
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Application:

Please send your **CV**, a **cover letter**, and your **Master's transcripts** (if available) to:

Dr. Ammar ALJER

LGCgE-University of Lille

ammar.aljer@univ-lille.fr