

Role: Summer Student Collaborator

Job Title: Summer Student Collaborator (Undergraduate or Master's Level) Open Map Database of Irish Data Centres

Department: Energy Policy and Modelling Group, Sustainability Institute, School of Engineering & Architecture, College of Science, Engineering & Food Science, University College Cork.

Project Supervisor: Dr Teresa Bonserio

Role:

Information regarding existing and planned data centres in Ireland currently lacks transparency. Many operators do not publicly report the number, location, or technical specifications of their facilities. While some online databases (e.g., datacentresmap.com, baxtel.com) attempt to collect this geographical and technical data, they are often inaccurate or missing key infrastructure. Understanding the true scale and status of Irish data centres is critical to analysing their current and future impact on the national energy sector.

This student project aligns with a broader post-doctoral research initiative led by the project supervisor, Dr. Teresa Bonserio, aimed at creating a comprehensive database of Irish data centres. The post-doctoral research utilizes openly available sources (planning applications, technical sheets, etc.) to derive technical information and precise locations for existing and planned facilities.

The primary objective of the student's work is to translate this newly compiled, localized data into an openly accessible, visual online format.

Key Responsibilities:

1. **Database Contribution:** Mapping the ~130 data centre facilities, already classified and identified by the supervisor, into [OpenStreetMap \(OSM\)](https://www.openstreetmap.org/), a global, collaborative geographic database.
2. **Custom Layer Creation:** Developing a dedicated, open-source web map (using tools such as [uMap](https://uMap.org/)) to highlight these specific facilities.
3. **Data Integration:** Populating the custom map with extended technical metadata, such as operator names, installed capacity, and operational status (already collected by the supervisor).

This role is fundamental to ensuring that this infrastructure data becomes publicly accessible to scholars, stakeholders, and the general public, while laying the groundwork for a continuously updated and collaborative platform.

Additional Information:

Publication: If time permits and the mapping is completed to a high standard, the resulting web map will be cited and included in the upcoming scientific publication reporting on the database, offering the student a co-authorship or acknowledgment opportunity.

Future Research: For a highly engaged and successful candidate, there is strong potential to extend this collaboration into an MSc or PhD project focusing on the impact of data centres on energy systems.

Essential Criteria:

- Currently enrolled in an undergraduate or postgraduate programme in: Engineering (Energy, Mechanical, Environmental, or related), or Climate Science, Environmental Science, or related discipline.
- Strong analytical and problem-solving skills
- Basic experience with excel.
- Good written and verbal communication skills.
- Ability to work independently and as part of a team.

Desirable Criteria:

- Familiarity with mapping tools or software would be helpful.
- Experience with energy systems/power sector/ similar.

Stipend: € 1,500 per month (FTE)

Application Process

Applicants should submit:

- A CV (max. 2 pages)
- A short cover letter outlining their interest and relevant experience

To Dr Teresa Bonserio TBonserio@ucc.ie

Equality, Diversity & Inclusion

We are committed to fostering an inclusive and diverse research environment and welcome applications from all backgrounds.
