

Internship Vacancy Description:  
**Data Analysis internship**  
*Reference: 23.11*

## 1. The Company

Trama TecnoAmbiental (TTA), with headquarters in Barcelona (Spain), is an international engineering and consulting firm in business since 1986 in the field of renewable energies and specialized in distributed generation and energy access for development. TTA's multidisciplinary team has comprehensive experience at both technical and management levels and has been exposed to many international projects all over the world.

**TTA offers a full range of cross-cutting engineering & consulting services** for all kinds of renewable energy and energy access projects, such as:

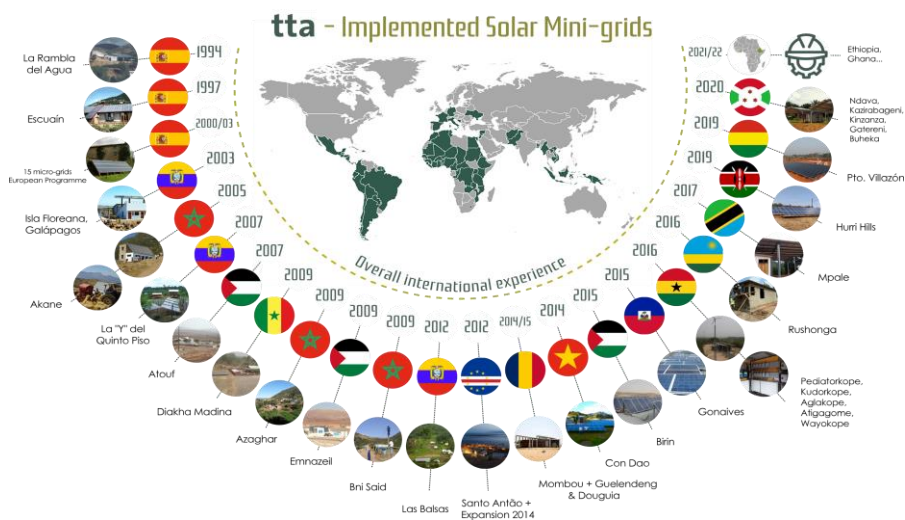
- *Consultancy in energy access and renewable energy projects (off-grid and on-grid).* Project identification and evaluation; Technical and Economic feasibility studies; Assessment of renewable energy sources, Engineering studies; Social and environmental impact assessments; Owners Engineering services; Preparation of technical specifications and bidding documents; Support during procurement; Construction supervision; Monitoring services; Operation and Management services; Project promotion and dissemination.
- *Engineering Procurement & Construction (EPC) of micro-grids.* Design, supply, installation and commissioning of micro-grid projects.
- *Energy efficiency and green buildings.* Evaluation, design and monitoring of energy efficiency projects; Energy auditing; Integration of renewable energies into buildings and green building practices.
- *Institutional, Policy and Regulatory Support.* Design of rural electrification policies, programmes, strategies and action plans; Policy development and planning; Development of business models and tariff schemes; Market potential assessments.
- *Product development.* Development of products specific for renewable energy and rural electrification projects.
- *Capacity Building.* Capacity building and specialized trainings.
- *R&D.* Publication of articles, documents, guidelines, case studies, and presentations at international conferences.

TTA is a **pioneer firm in renewable energy-based generation and solar PV Hybrid mini-grids**. At the forefront, TTA was the driving force for the implementation of the first micro-grid projects in Spain in the early 1990s, and later applying its expertise in Latin America, Africa, and the Mediterranean. Having collaborated in various tasks of the International Energy Agency (IEA), TTA was awarded with the EUREC Technology Prize 2001 “for developing excellent system technology for rural electrification based on renewable energy sources, combined with an innovative, user-oriented approach for its implementation”. Furthermore, in September 2015, TTA was awarded with the Prize “Off-Grid Experts Awards” by the company Phaesun together with ARE (Alliance of Rural Electrification), for excellence in the performance in the field of Off-Grid power supply, in the Category A “product” for TTA's “Electricity Dispenser”, an advanced meter for mini-grids.

In terms of **publications**, TTA has been the main contributor of the IRENA’s Innovation Outlook: Renewable Mini-grids (2016) and is author of the World Bank’s ESMAP Benchmarking study of Solar PV mini grids investment costs (2017 & 2018).

Another significant milestone in the sector is TTA’s lead organization of the **International Conference on Solar Technologies & Hybrid Mini-Grids to improve energy access**, a relevant sector event being held in Mallorca (Spain).

**TTA’s track record** in the field of Renewable Energy and Rural Electrification is demonstrated by the extensive list of projects carried out around the globe for project developers, contractors, power utilities, governments as well as all major International Organizations such as the World Bank, IFC, UNDP, UNOPS, UNIDO, UNICEF, GEF, UNESCO, IDB, OAS, European Commission, AECID, GIZ, KfW, and other cooperation and development agencies, NGOs, local communities and individuals.



TTA is also a member of and/or collaborates with the following organizations and Groups. TTA was a founding member of the **Alliance for Rural Electrification (ARE)**.



Further detailed information on the work of TTA can be found at: [www.tta.com.es/en](http://www.tta.com.es/en). Please see some of our Microgrids projects: <https://youtu.be/Z21tenW9YXE>, <https://youtu.be/NibFpRHk8YU>

## 2. Job description

TTA is seeking a Master **student** to support the Knowledge and Innovation department (KID) with the **development of an internal procedure to improve the processing and management of relevant project data**. This data should be organized in an online database/platform, preferably on Google Cloud Console, to facilitate access and utilization where data are categorized using tags or keywords.

The data analysis will be mainly focused on the following:

- **Cost.** The company has gathered various cost references from components manufacturers, market benchmarks, consultancy studies and real bids in international tenders. Extrapolating cost information for the key components of the mini-grids and renewable/hybrid energy systems is crucial to inform future technical and financial analysis.
- **Energy demand.** Estimating the demand of a rural community with no current access to reliable sources of energy is one of the sector's biggest challenges. TTA has conducted numerous surveys and analyses in communities across the world, assessing their needs and challenges. Organizing these datasets and creating references from real data collected on-site is essential to refine and fine-tune demand assessments and design the optimal energy system.

## 3. Responsibilities

Under the supervision of the Knowledge and Innovation department and/or by one of the Regional Units, depending on the person's profile, the intern is expected to:

- Conduct a survey of the company's current data management and visualization practices.
- To understand the fundamentals of energy access and development projects to be able to navigate and comprehend TTA's datasets.
- Analyze the needs for demand data and cost benchmarking databases.
- Create a proposal on how the database could be structured with a template that incorporates the definition of each data type.
- To navigate, identify and use the available datasets to start filling out the databases.
- Create a visualization board using data visualization software.
- Automate the feeding of the databases from installed data loggers across TTA's projects.
- To develop a guide to facilitate database updating with standardized procedures.

## 4. Profile

The ideal candidate for this position will have the following competencies:

1. **Educational Background.** On-going Master's degree in electrical engineering, energy management or engineering, mechanical engineering, software development or engineering, data management or engineering, information technology engineering, or similar technical engineering or IT degree is required. Specific education in renewable energies, solar Photovoltaic (PV) and/or energy access will be an advantage.

2. **Working Experience.** No working experience is required. Previous internships experience is an advantage.
3. **International Experience.** Experience in developing countries is not required but desirable (internships, volunteering, etc.).
4. **Languages.** Fluency in **English** is essential. Spanish is preferred but not required.
5. **Computer Skills.**
  - Excellent command in Microsoft Word, Excel and Google Drive tools.
  - Experience with Tableau or PowerBI is preferred.
  - Knowledge in database management and software (e.g., MySQL, Microsoft SQL Server, Google Cloud Console, etc.) will be an advantage.
  - Experience dealing with large amounts of information (such as databases)
6. **Interests.** Passionate about renewable energy, energy access, and supporting development projects.
7. **Skills.**
  - Ability to work with minimum supervision.
  - Analytical skills, efficient designing and implementing of processes.
  - Methodical and well-organized.
  - Ability and proven experience to think creatively, learn quickly and develop innovative solutions involving electrical and mechanical challenges.
  - Cross-cultural communication and interpersonal skills.

## 5. Conditions

- Type of contract: Internship
- Contract duration: minimum 4 months.
- **Salary and benefits:** TTA offers a multicultural and flexible working environment with a focus on teamwork and constant learning. The position offers compensation depending on the conditions stated by the student's university. Paid vacation: 1 day/month worked.
- **Starting date:** Immediate.
- **Position based in** Barcelona office and remote locations will be considered if candidate is strong and demonstrates remote communication will be sufficient.

**Apply >>** If you are interested in applying for this position, please click on the following link where you will find the procedure to follow (upload CV and fill-in form): <https://goo.gl/forms/i05SOg847G7bsybE3>

Only shortlisted candidates will be contacted.