



6-month internship opportunity starting in February/March/April 2020

PV plant performance data analysis and modelling

Company description

QUANTOM is a Paris-based start-up founded in 2014, developing turn-key solutions for boosting the performance of existing photovoltaic (PV) installations. Recent studies show that a large fraction of utility and residential PV installations benefiting from national feed-in tariffs (FIT) operate with a suboptimal performance. QUANTOM is developing a range of software and hardware-based solutions to boost the power output of existing installations, increasing the return on investment for the plant owners. Performance audits represent a key element of the retrofit feasibility study and help select the most adequate technical solution. QUANTOM is in rapid expansion and needs your help to meet its objectives.

Internship Description

Data loggers present in recent PV installations record real-time power output of inverters and strings of PV modules. The measured quantities include the power, current, and voltage at the maximum power point.

The primary objective of the internship is to use the collected production data along with satellite-estimated irradiance and meteorological data to perform detailed performance audits of commercial PV installations in France. Examples of tasks within a given performance audit include:

- Calculation of various performance metrics (for example the Performance Ratio)
- Identification and quantification of key performance losses and degradation trends
- Proposition of one or more technical solutions for increasing the long-term performance
- Simulation of the long-term energy production under different scenarios
- Presentation of results in written reports

The data analysis will be performed in the Python programming language.

Additional Details

- The auditing and modelling tools are to be developed in the Python programming language using the best coding practices (code commenting, modular design...)
- QUANTOM may organize field trips to visit existing PV installations and test benches
- There is a possibility of a job offer upon the successful completion of the internship



Profile Description

- Masters student in the field of renewable energy
- Knowledge of solar energy / PV system principles
- Programming experience with MATLAB or Python
- Quick learner, critical thinker
- Ability to work autonomously and in a team environment
- Excellent organization and communication skills (English + French)

Our Offer

- 6 months internship starting in February/March/April 2020 with 800€ per month compensation
- Great location (center of Paris, proximity to the metro)
- Great neighborhood with plenty of restaurants and cafés
- Strong societal impact
- Excellent working environment and team cohesion
- International team

Location

Center of Paris

Contact

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