Bachelor / Master Thesis – **Identification of power and yield loss by analysing evaluation strategies**

For quality control of solar parks we analyse monitoring data of electrical yield during operation. In order to detect malfunctioning components (e.g. PV-modules, inverters) the collected data (current, voltage, and weather data (solar irradiance, wind, ambient temperature)) have to be processed and evaluated.

In this thesis, monitoring data for several years of various PV-plants with differing known and unknown failure types shall be evaluated. This includes data preprocessing, data plausibility check, data filtering. A statistical approach should be developed and applied for the identification of irregularities. The findings will be verified by using imaging methods.

TODO’s:
- Analysis of temporally resolved monitoring data of several PV-plants with differing failures
- Processing module and weather data
- Applying statistical methods for failure identification

Qualification:
- Student of Material Science, Computer Science, Physics or comparable
- Profound technical knowledge
- Experience in a programming language and data analysis is beneficial

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