

Bachelor / Master Thesis – Identificaion 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.

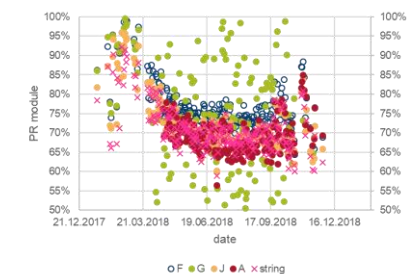
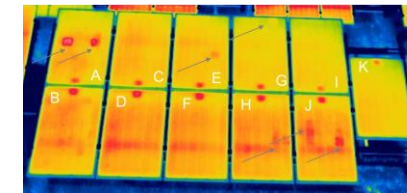
In this thesis, monitoring data for several years of various PV-plants with differing known and unknown failure types shall be evaluated. This includes data preprocessing, data plausibility check, data filtering. A statistical approach should be developed and applied for the identification of irregularities.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