Welcome mallibus@gmail.com

DOWNLOAD TRAINING DATASET

DOWNLOAD TESTING DATASET

The challenge is closed. Thank you for your participation!

The winners will be soon contacted via email with the instructions to redeem their prize.

Final leaderboard

Temporary leaderboard

Submissions are open! Don't forget to include the column header and to submit min-max normalized predictions.

Five temporary submissions and one final submission are granted to each user, in the time frame from Jul 20 to Jul 24 at 23:59:59 (UTC-12 Time Zone).

The temporary leaderboard is automatically evaluated on a validation set, considering the best submission for each user.

Be aware that temporary submissions are not saved. You should submit the definitive file using the appropriate form.

Clarifications about the task

- Data cleaning and preprocessing should be performed beforehand, in order to remove outliers, missing data and dirty measurements of sensors which could degrade model performances;
- The plants considered in the dataset have a maximal power rate of 1000 kW/h;
- Min-max scaling (between 0 and 1) on power variables needs to be performed on the training and testing data before applying the prediction model, identifying the maximum value of the power and using the same range [0, max] to normalize all power features.

List of files

- plant-irradiance.csv
- plant-temperature.csv
- plant-power.csv
- weather-cloudcover.csv
- weather-pressure.csv
- weather-windspeed.csv
- weather-dewpoint.csv
- weather-temperature.csv
- weather-humidity.csv
- weather-windbearing.csv

Plant data are gathered locally from sensors available on plants, whereas weather data are extracted from closest meteorological stations.

Submission Format

The submission should be a CSV file containing the id of the specified plant, the date, and the time series of production.

Sample submission format:

```
#IDPLANT,DAY,P2,P3,P4,P5,P6,P7,P8,P9,P10,P11,P12,P13,P14,P15,P16,P17,P18,P19,P20
1,YYYY-MM-DD,0,0,0,0.1,0.2,0.4,0.5,0.55,0.6,0.7,0.72,0.74,0.7,0.58,0.42,0.28,0.12,0,0
2,YYYY-MM-DD,0,0,0,0.05,0.12,0.18,0.3,0.35,0.4,0.45,0.55,0.64,0.48,0.38,0.25,0.13,0.08,0,0
```

3,YYYY-MM-DD,0,0,0,0.07,0.13,0.2,0.23,0.27,0.29,0.31,0.42,0.5,0.38,0.3,0.24,0.18,0.04,0,0

...

Credits

Any use of the provided dataset should cite the following paper, which includes further details about the data and assesses existing approaches for PV power forecasting:

M.Ceci, R.Corizzo, F.Fumarola, D.Malerba, A.Rashkovska: Predictive Modeling of PV Energy Production: How to Set Up the Learning Task for a Better Prediction? IEEE Transactions on Industrial Informatics (DOI: 10.1109/TII.2016.2604758);

http://ieeexplore.ieee.org/document/7556989/

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