**Title** : Literature review for “Photovoltaic (PV) power and solar radiation forecasting”

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**Description**: The following is a brief summary of the relevant and related literature review on the subject

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| Articles / Papers | Methodology and model architecture | Dataset used | Best scores |
| [Photovoltaic power and solar radiation forecasting](https://sci-hub.st/https:/aip.scitation.org/doi/abs/10.1063/5.0014016)  **Authors**: Yuhao Nie *et al.* | Based on 2-stage classification-prediction architecture: the model first classifies input images into 3 sky conditions (sunny, cloudy, overcast) and then the classified images are sent to sky-condition-specific sub-model for PV output prediction. | 102885 sky images (down-scaled to 64 X 64 pixels) and PV power outputs. | RMSE = 7,3 % (2.20 kW error over 30 kW rated PV array, on a test set comprising 18 complete days, 9 sunny and 9 cloudy) |
| [Photovoltaic power prediction of LSTM model based on Pearson feature selection](https://www.sciencedirect.com/science/article/pii/S2352484721009768?via%3Dihub)  **Authors**: Hailang Chen *et al.* | Pearson coefficients were used for correlation tests (Pearson feature selection) to remove irrelevant features such as ambient temperature, relative temperature and solar irradiance and the remaining features were modeled using a LSTM network to predict the PV power output for the next hour. | PV metering station data (temperature, wind speed, PV panels temperature, humidity, total radiation, barometric pressure, power indicators): 3142 sets for training and 3142 sets for testing | RMSE = 15% (with 10 MW rated PV array. 12,1% under sunny conditions and 18,1% under cloudy conditions) |
| [Deep Learning Based Surface Irradiance Mapping Model for Solar PV Power Forecasting](https://ieeexplore.ieee.org/stamp/stamp.jsp?tp=&arnumber=9054985)  [Using Sky Image](https://ieeexplore.ieee.org/stamp/stamp.jsp?tp=&arnumber=9054985)  **Authors** : Zhao Zhen *et al.* | A hybrid mapping model based on deep learning applied for solar PV power forecasting is proposed in this article. First, the sky image data are clustered based on the feature extraction of convolutional autoencoder and K-means clustering algorithm after preprocess stage. Second, a hybrid mapping model based on deep learning methods are established for surface irradiance. | The sky imager and irradiance meter are deployed in a meteorological station located in solar PV plant, and they measure and record the sky image and irradiance simultaneously. The time resolution of sky image and corresponding irradiance data is 15 min. The data is from the National Renewable Energy Laboratory (NREL). |  |
| [Short-term Solar Irradiance Prediction from Sky Images with a Clear Sky Model](https://openaccess.thecvf.com/content/WACV2022/papers/Gao_Short-Term_Solar_Irradiance_Prediction_From_Sky_Images_With_a_Clear_WACV_2022_paper.pdf)  **Authors**: Huiyu Gao and Miaomiao Liu. | A network structured on the vision transformer to encode the spatial as well as the temporal information in the sky video sequence to predict the solar irradiance residual from the learned representation by explicitly using a clear sky model. | TSI880 and ASI16, publicly benchmark datasets built by Solar Radiation Research Laboratory (SRRL) of the National Renewable Energy Laboratory (NREL). |  |