(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :09/11/2023

(21) Application No.202341076752 A
(43) Publication Date : 22/12/2023

(54) Title of the invention : MACHINE LEARNING-BASED POWER FORECAST MODEL WITH MULTI-DATA FUSION

(51) International classification :G06Q0010040000, G06Q0050060000, G06N0003080000, H02J0003380000, G01W0001100000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
Large-scale integration of renewable energy sources, such as solar photovoltaic (PV) power, into contemporary smart networks is being achieved. The key to maintaining the power grid's reliable functioning is accurate photovoltaic forecasting. The system's constraints make it challenging for a single prediction method to be universal. Consequently, a hybrid ultra-short-term photovoltaic power forecast model based on multi-source data fusion and deep learning is proposed in this study. First, a fusion of the historical power patterns, satellite cloud images, and Numerical Weather Prediction (NWP) data is performed. After that, the models for predicting solar power are created utilizing the proper deep-learning techniques.

No. of Pages : 12 No. of Claims : 3