



ACHIEVING OPTIMAL SOLAR PANEL PLACEMENT WITH RESPECT TO SOLAR RADIATION AND GENERATION

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ABSTRACT:

There are various types of renewable energy, the most attention has been on solar energy since it can convert energy directly into electricity. Maximizing the efficiency of solar energy systems is crucial for harnessing the full potential of this renewable resource. This project focuses on leveraging machine learning (ML) techniques to enhance solar power generation by accurately predicting solar radiation levels. These models continuously analyse incoming data from weather stations and sensors to predict solar radiation levels for specific time intervals. Finally, its help to predict the suitable place for fixing the power panel based on the solar power generation and solar radiation.

KEYWORDS: Machine Learning algorithms, Solar power, Solar electricity, Random-forest algorithm.