

PREDICTIVE ANALYTICS OF SOLAR POWER GENERATION USING DATA SCIENCE

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ABSTRACT

By 2040, India's share of the world's energy consumption is predicted to quadruple to 11%, making it imperative to boost energy security and independence in terms of electricity generation without raising environmental costs. As a result of this increase in demand for power, India's reliance on coal, oil, and natural gas as energy sources is probably going to increase. Understanding the elements that contribute to time delays and coming up with strategies to reduce them while increasing productivity are the main objectives of this study as they relate to the steel detailing industry. There have been several successful research on how to increase solar power generation utilising a variety of models and strategies, taking into account how employee happiness with their jobs, workplace culture, and motivational variables, as well as their training and development, changes. The goal of this project is to determine how data science techniques may be applied to forecast solar plant output more accurately. Using historical solar power generation and weather data, machine learning techniques like linear regression can be used to forecast solar power generation based on the analysis of the identified issue.

KEYWORDS: *Climate Data, Productivity Rate, Science Techniques, Job Satisfaction, Motivation Factors, Work Culture, Training And Development, Solar Plant Production*

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