HERE COMES THE SUN
Predicting Solar Power Generation

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SOLAR ENERGY

has been on the rise on a global scale. However, the volatile nature of this fuel source poses challenges in forecasting the power it can generate.

BUSINESS VALUE

Reduce unnecessary forecasting error costs

Increase accuracy in project valuation

Ensure power grid security, stability, and integrity

METHODOLOGY

Sourced hourly data from the Wholesale Electric Spot Market and Weather Underground from 2017 to 2019

A 80-10-10 Train-Validation-Test split

Used a 2-layer LSTM with 64 and 128 nodes

Baseline Error
Model Error

6.45%   3.23%
Clark Solar Power Plant
22 Megawatt Capacity

5.88%   2.63%
Valenzuela Solar Power Plant
8.5 Megawatt Capacity

Subic Solar Power Plant
100 Megawatt Capacity

1.95%   1.40%

7.67%   4.20%
First Toledo Solar Power Plant
60 Megawatt Capacity