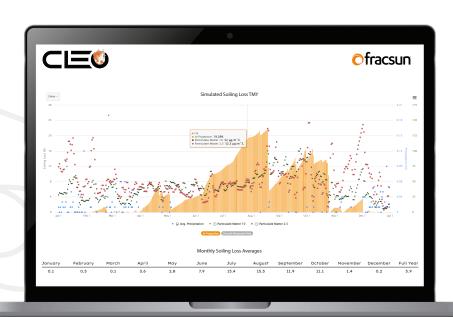




AI-POWERED SOILING LOSS ENGINE

The Fracsun CLEO AI stands at the forefront of solar energy management, combining advanced machine learning techniques with comprehensive weather data. With ongoing improvements and a growing dataset, it promises to deliver even more accurate predictions, enhancing the efficiency of solar energy systems.



Monthly Solling Loss have September October November December Pull Year September October November Pull Year September Pull Year September



SPECIFICATIONS

Enhanced Energy Production	Optimize cleaning schedules based on predictive insights.
Data-Driven Decisions	Utilize real-time data for effective asset management.
User-Friendly API	Access location-specific predictions effortlessly.
Weather Data Interpolation	Utilizes Spatial Kriging to fill data gaps and provide comprehensive weather datasets.
Training Data Creation	Integrates historical soiling observations with weather data for robust predictions.
Soiling Rate Prediction	Employs Random Forest Regressor, ideal for non-linear environmental data, ensuring high accuracy.
Spatial Kriging	Leverages historical EPA weather data (2020-2023) to create continuous weather variables crucial for soiling predictions.
Soiling Rate Autoregressive Model	Merges weather data with extensive soiling observations to identify complex relationships influencing soiling rates.
Soiling Loss Simulation	Real-time simulation based on user-defined parameters, incorporating weather influences and cleaning events.

