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DSSE Algorithm Approach

- **Neural Network-based Hybrid Algorithms** or a combination of **Deep Learning-based Estimation** and **Kalman Filter-based Hybrid Algorithms (e.g., UKF or EnKF)** would likely be the best choices. Here's why:
- **Neural Network-based Hybrid Algorithms**: These can effectively model the complex, non-linear relationships inherent in solar power generation data, especially when incorporating weather conditions and environmental factors. They are particularly effective if you have access to large historical datasets for training.
- **UKF or EnKF**: These are robust for real-time applications, can handle non-linearities, and when combined with neural networks, can provide a powerful framework for accurate and reliable solar power generation predictions. The neural network can handle complex feature extraction and non-linear modeling, while the Kalman Filter can manage real-time updates and uncertainty quantification.
- **By combining these approaches and the amount of datasets available,** you can leverage the strengths of both machine learning and state estimation techniques to achieve high accuracy in solar power generation prediction for the HeroX Solar Visibility Competition.