

Generative AI-Based Hailstorm Protection System for Photovoltaic Systems

Problem: \$1B/yr in hail damage to solar panels

- Hailstorms pose a significant threat to solar energy installations, particularly in hail-prone regions such as the Midwest, Great Plains, and Southeast United States
- Existing solutions for hail protection rely on manual stowing or hail detection sensors that do not provide sufficient lead time to prevent damage

Solution: Generative AI for Hail Prediction

- Cutting-edge generative diffusion AI algorithm to forecast hail events in advance (**15-minute prediction window**)
 - Automatically stow solar panels at up to a 75-degree angle to minimize potential damage
 - Compatible with existing single and dual-axis trackers
 - Goal: 40% reduction in hail damage
- B2B business model targeting O&M teams for solar developers

