

Technical assistance request for the project entitled:

Leveraging DASION's AI/ML, Anomaly Detection, and Robotic Technology to Control Robots for Constructing Solar Farms in Extreme-Heat Locations

Abstract: DASION's proposal targets challenges posed by harsh climates in remote regions such as the Salton Sea, which offer significant potential for solar energy and lithium harvesting. We are addressing the problem of unseen land conditions, akin to compact or hidden rocks beneath the surface, missed by field scans, requiring software capable of swiftly offering solutions to navigate these challenges. DASION is developing advanced AI/ML-driven software for anomaly detection & robot trajectory design, aimed at crafting dynamic & optimal solutions to

remotely control robots to install solar panels in harsh conditions where human workers are unable to work onsite.

Salton City: Extreme Heat & Toxicity Necessitate Robotic Solar Farm Construction

Environmental Concerns: The Salton Sea is known for its environmental challenges, including water quality issues and the potential for toxic dust from exposed lakebed areas. These issues may have raised concerns about the impact of large-scale solar projects on the environment and wildlife in the area.



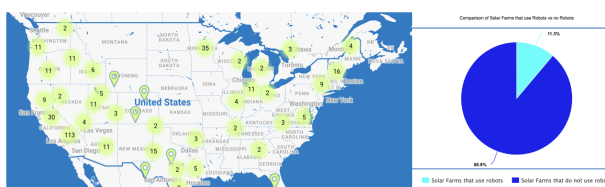
Our goal is to demonstrate our solution's validity and scalability on Set! Demo Day and then focus on acquiring customers, boosting efficiency, forming partnerships, and cutting costs on Go! Demo Day. With support from hardware and solar companies, along with research lab

contributions, we plan to achieve these objectives in the next 3-5 years.

Request for Support

The proposal places a strong emphasis on technical specifications, advocating for innovation that is deeply rooted in practicality, and the establishment of a sustainable business model. Dasion hopes to collaborate with solar companies that are already implementing autonomous robots in the installation of solar panels, especially those shown in the above figure.

Close to 90% of solar farms were manually built where human could work onsite.



AI/ML Integration:

Collaborative efforts or guidance in navigating potential challenges while integrating AI/ML-driven technologies into our software.

Validation and Scalability Testing: As Set! Demo Day approaches, we seek assistance in rigorously validating and testing the scalability of our software and robotic systems directly on-site in the solar field.

Risk Mitigation and Strategic Planning:

Mitigating risk through stakeholder feedback, establishing strategic alliances, implementing targeted marketing, and ensuring compliance are integral components of our strategy.

Operational Efficiency and Cost Reduction Strategies:

Insights and best practices in operational efficiency and cost reduction measures will be crucial.

We are seeking help from national labs, Connectors in the network, and other companies that can provide the following or other related assistance:

1. Robotic:
 - Research scientist with experience in diagnostics and sensor development.
 - Manufacturers and mechanical engineers can help us enact the necessary devices onto the autonomous trucks, used for solar panel installation, to collect data for our software.
2. Sensors:
 - Research scientists who can share leading sensor technology to help our software create optimal solutions.
3. On-Site Testing Support:
 - Support from Solar Companies with autonomous robots for testing effectiveness and risk mitigation purposes.
 - Research scientists can diagnose problems or malfunctions promptly, enabling quick resolution and minimizing downtime.
 - Analytic report on improving installation time and effectiveness.
4. AI/ML:
 - Help from software engineers in overcoming potential problems with code optimization and system integration.
 - Collaboration from software companies to collectively drive innovation and address common challenges.
5. Solar Energy Calculation:
 - Help electric experts on how to maximize solar energy intake from solar panels, taking this information as a factor to consider in building our software.
 - Research scientists provide information on the placement of solar panels to maximize energy intake.