

AI-based Solar Panel Detection in Madhya Pradesh Using Satellite Data

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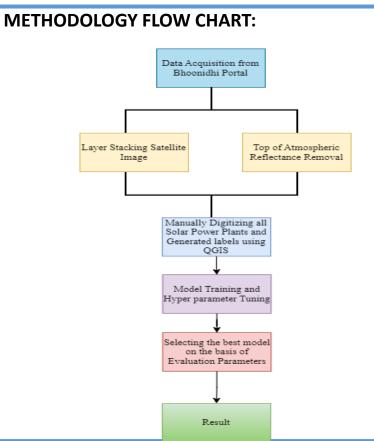
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Name: Mayur Kailas Patil Designation: Researcher Institution: ISTAR

MAJOR OBJECTIVES:

- ✓ Dataset Preparation for training the model.
- ✓ Detecting Solar Panels from Satellite Data using U-Net Model.
- ✓ Removed Top Atmospheric Reflectance from Satellite Data.



RESULTS/MAJOR FINDINGS:



CONCLUSION:

✓ The image which is displayed here is the result of Residual Attention U-Net model which I used for training phase which gave the accuracy of 89% on Validation Phase.

- ✓ I also have used same model for the dataset of Top of Atmospheric Reflectance Removed for which I got 84% accuracy on the validation phase.
- ✓ The Residual Spatial Channel Attention U-Net model which was used to train on the bigger extent images gave the accuracy of 69%.

The Residual Attention model has demonstrated remarkable performance, achieving high accuracies on both training and validation sets, along with a commendable validation Jaccard coefficient. Despite encountering challenges in classifying all patches of solar panels accurately, the model's overall performance highlights its potential for real-world applications.