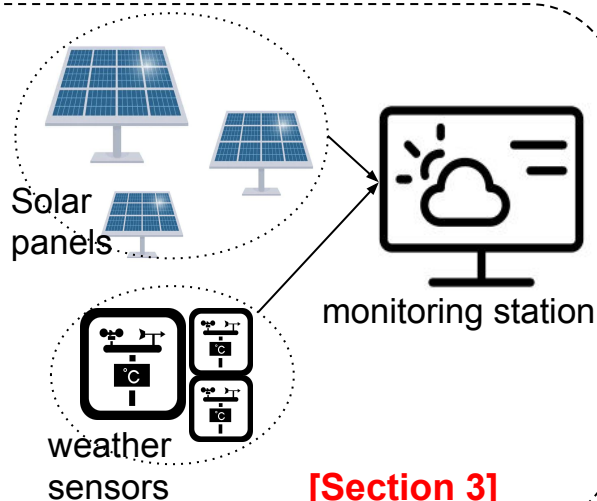


Regional Solar Power Generation station:



[Section 3]

Acquired Data

Data pre-processing:

1. Average parameter selection

2. Missing value imputation

3. Negative value removal

Data Cleaning

4. Row wise reduction

5. Column wise reduction:
5.1. Domain-knowledge based
5.2. Pearson Correlation based
5.3. Lasso & elastic regression based

Data Feature Selection & Dimensionality Reduction

5. Data Normalization: Min-max
6. Data Visualization: Bar-plots, scatter plots, histograms, correlation heat maps.

Data Transformation and Visualization

[Section 3]

Processed Data

Prediction of solar power:

1. Bagging:
 - 1.1. Random Forest
 - 1.2. Extra Trees
2. Boosting
 - 2.1. Adaboost
 - 2.2. LightGBM
 - 2.3. GBM
 - 2.4. XGBoost
3. Stacking
4. Voting

Ensemble ML algorithms

[Section 4]

Results of Prediction

1. Environmental Impact Analysis
2. Experimentation, Analysis & Discussion

[Sections 5 & 6]