# Renew Power Hiring Hackathon MachineHack

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Thank you, **Renew Power** and **MachineHack,** for providing me with this opportunity.

# Proposed Approach(Moderately Scalable & Highly Generalizable)

The proposed approach uses modeling based on each turbine id using fully engineered features along with square root data transformation, 5-Fold Cross-validation, and later getting the median of all the predictions made by models on test data.

**Data Cleaning**: No null values or duplicate rows.

**Handling Outliers**: Square Root Transformation is used on data to handle the skewness of data.

**Feature Engineering**: All pairs of features are selected without repetition, to get new features by Dividing, summing, multiplying, and the difference between those pair features.

**Feature Selection**: This didn't improve the model results.

**Feature Scaling**: Standardization followed by Normalization is performed.

**Model Building**: Different algorithms are tried for this modeling, but ExtraTreesRegressor performed well relatively and is selected as the model in our proposed approach.

**Hyperparameter Tuning**: It didn't improve the model results.