Title: Supervised ML methods in Renewable Energy

Arpit Patil(PA14) Anish Tatke(PA09) Anuj Khot(PA43) Nancy Vachhani(PA56)
Madhura Patil(PA61) Shrutika(PA29) Pranav Bakre(PB14) Dhruv Toshniwal(PC53)

Objective:

To understand various real-world applications of using Machine Learning methods in Renewable Energy.

New Proposed Methods:-

Application	**Dataset**	**Methods**
Predict the level of solar radiation	Solar Radiation https://www.kaggle.com/dronio/SolarEnergy	Linear Regression, Random Forest Regression, Decision Tree Regression
Analysis of Global Power Generation from 1965 to 2018	Renewable Energy generation https://www.kaggle.com/khadeejahalghadeer/renewable-energy-generation-world-1965-to-2018	Classification(Country wise and Power wise), Regression Plot to predict future energy generation values, Clustering to group similar range power generation countries
Wind and solar power study	Wind and Solar Power Data https://www.kaggle.com/nitinsrinath/wind-and-solar-power-data	Prediction analysis and Clustering
Analysis of energy consumption worldwide	International Energy Statistics https://www.kaggle.com/unitednations/international-energy-statistics	Clustering(countries as well as year wise grouping), Visualisation, Linear regression(prediction analysis)
GeoThermal Power Generation Study	Geo-Nuclear Data https://www.kaggle.com/marchman/geo-nuclear-data	Regression For Prediction in Power Generation, Classification using K-nearest neighbours
Prediction of Hydropower Energy consumption	Hydropower energy consumption https://www.kaggle.com/khadeejahalghadeer/hydropower-energy-consumption-by-region	Linear Regression, Decision Tree
Prediction of power generation for next couple of days	Solar Power generation data https://www.kaggle.com/anikannal/solar-power-generation-data	Decision tree and random forest for performance optimality
Predict wind power	Wind power forecasting https://www.kaggle.com/theforcecoder/wind-power-forecasting	Linear Regression, Decision Tree