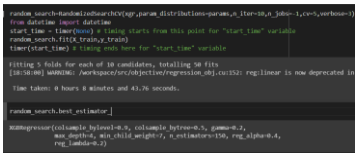
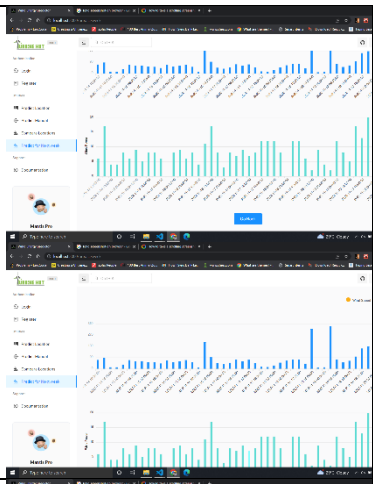
Project Development Phase
Model Performance Test

Date	10 November 2022
Team ID	PNT2022TMID52641
Project Name	Predicting the energy output of wind farm based on weather conditions.
Maximum Marks	10 Marks

Model Performance Testing:

S.No.	Parameter	Values	Screenshot
1.	Metrics	**XGB Model:** MAE - 153.07241961526898, MSE -133119.00533688476 , RMSE - 364.85477293970644, R2 score -0.9222746826171	R2-xgb 0.9222746826171284 RMSE-xgb 364.85477293970644 MSE-xgb 133119.00533688476 MAE-xgb 153.07241961526898
		Random Forest Regressor Model: MAE - 163.834419432915. MSE - 153920.68050223714, RMSE - 392.32726199212453, R2 score - 0.9101290329390023	R2-rfg 0.9101290329390023 RMSE-rfg 392.32726199212453 MSE-rfg 153920.68050223714 MAE-rfg 163.83441943291535
		LinearRegressor Model: MAE - 383.341158124016 MSE - 279467.17232606263, RMSE - 528.6465476346768, R2 score - 0.836825142945098	R2-lr 0.8368251429450982 RMSE-lr 528.6465476346768 MSE-lr 279467.17232606263 MAE-lr 383.3411581240167
2.	Tune the Model	Hyperparameter Tuning – (colsample_bylevel=0.9, colsample_bytree=0.5, gamma=0.2, max_depth=4, min_child_weight=7, n_estimators=150, reg_alpha=0.4, reg_lambda=0.2) Validation Method - RandomizedSearchCV, GridSearchCV	

3.	Dashboard design	No of Graphs - 2	
4.	Descriptive Reports	No of Graphs - 2