

## **Project Name: Tempest FWI Predictor – A Machine Learning Model to Predict Fire Weather Index**

### **Milestone - 2**

The goals were:

1. Perform Linear Regression – I implemented a linear regression model on the dataset using the Scikit-learn library in python. Split the dataset into training and test set in the ratio 80:20. Calculated the MSE,RMSE,MAE and R2 score for the dataset. From the values it was found that the model performs well on both training and test set therefore no overfitting and underfitting. Also plotted a graph on the predicted vs actual FWI.
2. Perform Ridge regression and tune the alpha – I performed ridge regression on the dataset and calculated all the error metrics that was calculated in linear model. The model performed almost same as linear. The model is not overfitting and underfitting. Tuned the alpha and it was found that lower alpha valued gave the least error. Plotted graphs for predicted vs actual FWI and alpha vs MAE(Mean Absolute Error).