Type: Application-Based Project

Project Proposal – Data Mining – IE 6318

Forest fires are one of the most common phenomena which occur mostly in tropical regions. Forest fires can lead to many devastating environmental effects such as high levels of air pollution, harm to flora and fauna in the forest, sudden rise in temperature of the surrounding area, etc. There are many causes that can lead to forest fires such as abrupt rises in temperature, human negligence, etc.

The dataset for this project has been taken from the UCI machine learning repository. The dataset has 12 attributes along with the class label. The attributes of the dataset are date, temperature, RH value, Windspeed, rain (in mm), etc., along with the class label.

Goal

The main goal of this project is to make a classification model which predicts whether there will be a forest fire or not using attributes such as wind speed, relative humidity, etc.

Project plan:

1. Collect dataset from UCI machine learning repository.
2. Perform exploratory data analysis.
3. Fit various classification algorithms on the dataset.
4. Evaluate and compare the performance of various classification algorithms using various metrics such as F1 score etc.
5. Choose the best performing model.