Solve in ipynb:

1. Import the dataset.
   https://archive.ics.uci.edu/ml/datasets/Algerian+Forest+Fires+Dataset++

   https://archive.ics.uci.edu/ml/machine-learning-databases/00547/

2. Do proper EDA(analysis) of your dataset and create a report from your dataset
   In EDA you are supposed to follow the given steps.
   Create a detailed profile of the dataset
   Perform graph based analysis
   Find out statistical insight from the data.

3. Then perform necessary preprocessing steps like
   If in the data there is missing value try to handle those missing values
   If there is categorical data try to encode it
   If there is imbalance data try to handle it
   If variation is too high try to scale your dataset
   If there is any outlier try to handle in a best possible way
   If there is any multicolinity in the dataset handle those variable

   NOTE: best approach will be appreciated.

4. Then create a classification and regression model for a given dataset.For the regression model try to consider the numeric feature as the target variable.For classification variables try to consider a categorical variable as a target variable(this will be based on your understanding)

5. For regression use linear regression, ridge regression and lasso regression, SVR, Decision tree regressor and random forest regressor along with cross validation and hyperparameter tuning.Try to showcase the MSE value for each model and try to find out the best possible model based on the R2 value.

6. In classification models try to use logistic regression, SVM, decision tree, naive bayes and random forest along with hyperparameter

tuning and cross validation and print your classification report and showcase the best possible model based on that report.

API Testing:

1. Now create a flask API for testing your model(via postman) or you can create an HTML page(optional)
2. While creating the API you have to perform single value prediction as well as bulk prediction.
3. Load your data via mongo db or mysql(for bulk prediction)
4. Try to perform api testing in a modular way (modular coding with classes and objects)
5. Do proper logging for your application.
6. Try to handle exceptions at each and every step.

7. Deploy this on heroku.

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