Regression

Neural networks(regression):-
MultilayerPerceptron:
For Brightness:-
Results for brightness prediction:
Root Mean Squared Error (RMSE): 15.382103073940078
R2 Score: 0.9910166605836039

Results for confidence prediction:
Root Mean Squared Error (RMSE): 16.35904110918971
R2 Score: 0.82095797848786

Classification

Binary Classification (wildfire):
- SVM
    - AUC: 0.8325664535906806
    - Accuracy: 0.7775320432269415
- Logistic Regression:
    - AUC: 0.8269593885213543
    - Accuracy: 0.7817039457150038

Random Forest Classifier:
    Random Forest Accuracy = 0.9496784565916399
GBT Classifier:
    GBT Accuracy = 0.9306346705449845

MultilayerPerceptron:-(classification)

Root Mean Squared Error (RMSE): 0.01010642515563663
R2: 0.9995679150261572

Accuracy: 0.9998978601705735
F1 Score: 0.9998978575948305

Optional ML results report:

Regression

Neural networks(regression):-

[MultilayerPerceptron](#):

For Brightness:

Results for brightness prediction:

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R2 Score: 0.9910166605836039

Results for confidence prediction:

Root Mean Squared Error (RMSE): 16.35904110918971

R2 Score: 0.82095797848786

Results for frp prediction:

Root Mean Squared Error (RMSE): 184.1705177323059

R2 Score: 0.158415720183953

LinearRegression:

For Brightness & frp:

Root Mean Squared Error (RMSE): 128.13682735099084

R2 Score: 0.379741368

Random Forest:

For Brightness & frp:

Root Mean Squared Error (RMSE): 159.96372335091

R2 Score: 0.1279021

XGBoost:

For Brightness:

Root Mean Squared Error (RMSE): 16.140426

R2 Score: 0.99012534567

For Confidence:

Root Mean Squared Error (RMSE): 15.639044668331405

R2 Score: 0.8369477987289429

For frp:

Root Mean Squared Error (RMSE): 187.40850784582912

R2 Score: 0.17566907498525275

LightGBM:

For Brightness:

Root Mean Squared Error (RMSE): 15.609637693582078

R2 Score: 0.8375604258986694

For Confidence:

Root Mean Squared Error (RMSE): 15.609637693582078

R2 Score: 0.8375604258986694

For frp:

Root Mean Squared Error (RMSE): 181.29950486927632

R2 Score: 0.22853500779938152

Classification

Binary Classification (wildfire):

SVM:

AUC: 0.8325664535906806

Accuracy: 0.7775320432269415

Logistic Regression:

AUC: 0.8269593885213543

Accuracy: 0.7817039457150038

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[MultilayerPerceptron](#):-(classification)

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