An Introduction to FLAML

TRAIN YOUR ML WITH 3 LINES OF CODE

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FLAML is a Python library that automatically finds accurate machine learning models in an efficient and economical manner, freeing users from the burdens of selecting learners and hyperparameters for each learner.

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FLAML is a lightweight Python library that finds accurate machine learning models automatically, efficiently and economically.

Installation

1. Regular Installation

```
pip install flaml
```

2. Conda Installation

```
conda install flaml -c conda-forge
```

3. Notebook Installation

```
pip install flaml[notebook]
```

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Setting Up FLAML

```
from flaml import AutoML



# Initialize an AutoML instance
automl = AutoML()
# Specify automl goal and constraint
automl_settings = {
    "time_budget": 1,  # in seconds
    "metric": 'r2',
    "task": 'regression'"}
```

You can modify time_budget to any number of seconds, set metric to r2 or accuracy or anything else., and finally task to either Regression/Classification

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Classification Example

Dataset: Iris

```
autoML = AutoML()
autoML.fit(X_train, y_train, **automl_settings)

print(autoML.model.estimator)
print(autoML.score(X_test, y_test))


# Output
```

BEST MODEL: ExtraTreesClassifier
ACCURACY_SCORE: 0.95

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Regression Example

Dataset: Taxis

```
autoML = AutoML()
autoML.fit(X_train, y_train, **automl_settings)

print(autoML.model.estimator)
print(autoML.score(X_test, y_test))
```

```
# Output

BEST MODEL: LGBMRegressor
R2_SCORE: 0.99
```

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