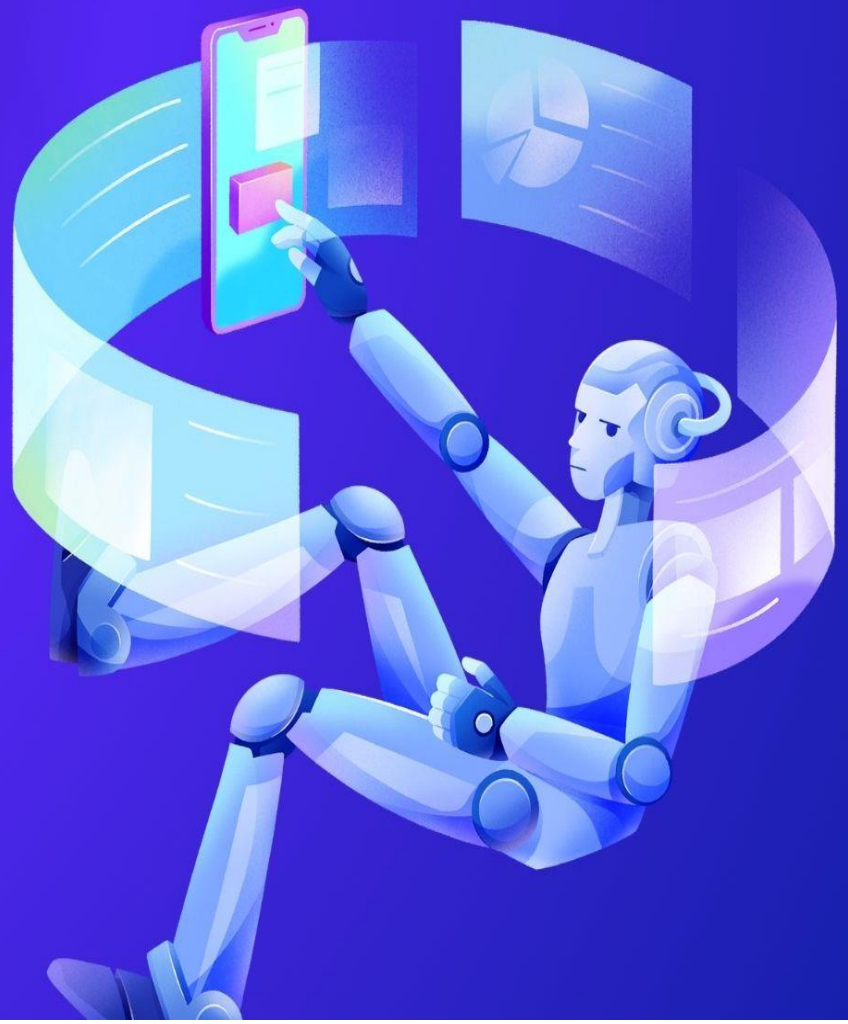
MLOPS

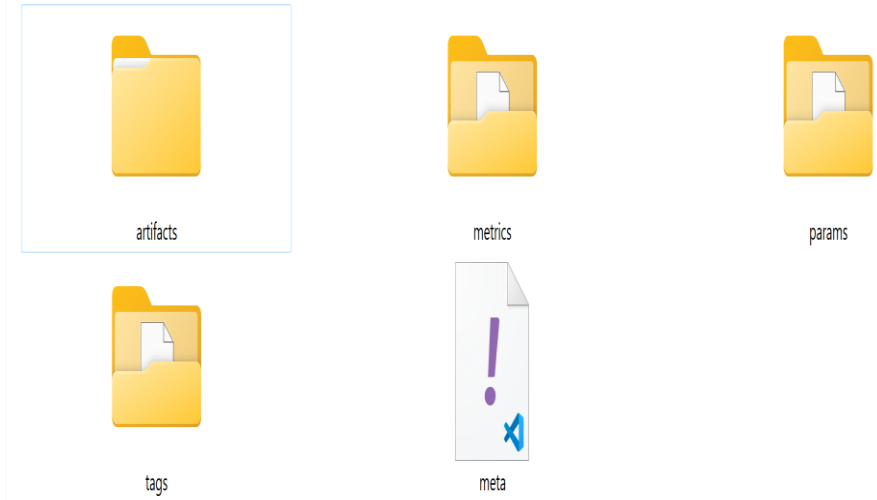


Agenda

- Structure of the mlruns Directory
- Autologging with MLflow Tracking
- Mlflow-Model
- Lab 3:Track Keras model training with MLflow

Structure of the mlruns Directory

```
mlruns/
├── <experiment_id>/
│   ├── <run_id>/
│   │   ├── artifacts/
│   │   ├── metrics/
│   │   ├── params/
│   │   ├── tags/
│   │   └── meta.yaml
│   └── meta.yaml
└── meta.yaml
```



Autologging

Metrics : MLflow pre-selects a set of metrics to log, based on the model and library used.

Parameters: Hyperparameters specified for training, plus default values provided by the library if not explicitly set.

Model Signature: Logs the model signature instance, describing the input and output schema of the model.

Artifacts : Includes items like model checkpoints.

Dataset : The dataset object used for training (if applicable), such as tensorflow.data.Dataset.

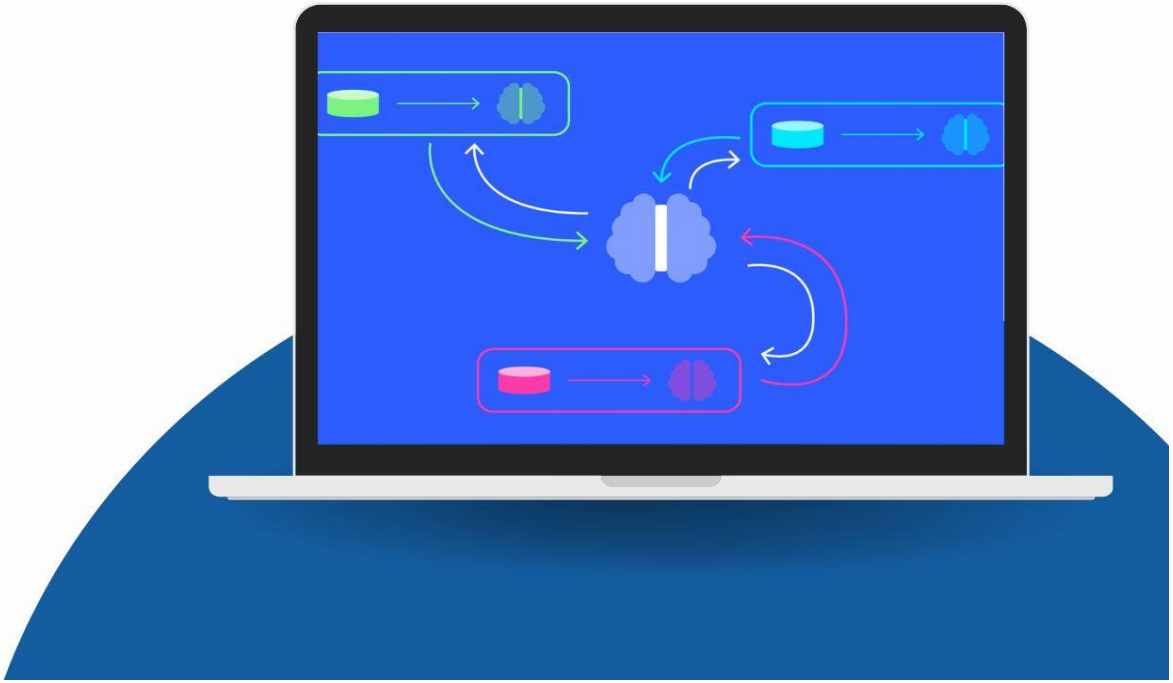
Libraries support autologging

- Fastai
- Gluon
- Keras
- LightGBM
- PyTorch
- Scikit-learn
- Spark
- Statsmodels
- XGBoost

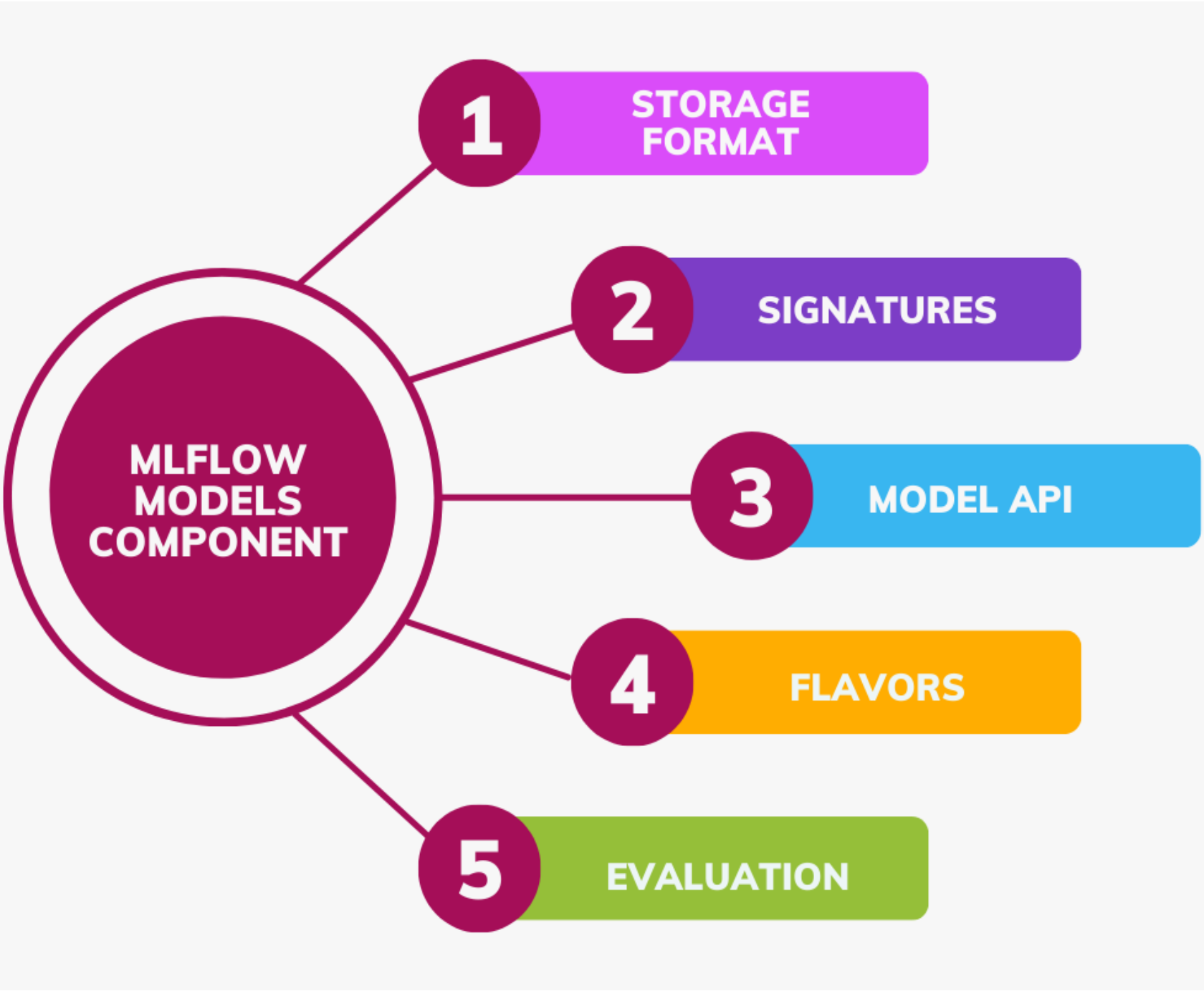
Enable Autologging for scikit-learn

```
mlflow.sklearn.autolog(
    log_input_examples=False,
    log_model_signatures=True,
    log_models=True,
    disable=False,
    exclusive=False,
    disable_for_unsupported_versions=False
)
```

MLflow Models



Model Component, which simplifies the management and deployment of machine learning models


MLFLOW MODELS COMPONENT
1
STORAGE FORMAT
2
SIGNATURES
3
MODEL API
4
FLAVORS
5
EVALUATION