

```
import tensorflow as tf
device_name = tf.test.gpu_device_name()
if device_name != '/device:GPU:0':
    raise SystemError('GPU device not found')
print('Found GPU at: {}'.format(device_name))
```

Found GPU at: /device:GPU:0

```
!pip uninstall pycaret[full]
```

Found existing installation: pycaret 3.3.2

Uninstalling pycaret-3.3.2:

Would remove:

/usr/local/lib/python3.10/dist-packages/pycaret-3.3.2.dist-info/*

/usr/local/lib/python3.10/dist-packages/pycaret/*

Proceed (Y/n)? Y

Successfully uninstalled pycaret-3.3.2

```
!pip install pycaret[full]
```

Collecting pycaret[full]

Using cached pycaret-3.3.2-py3-none-any.whl.metadata (17 kB)

Requirement already satisfied: ipython>=5.5.0 in

/usr/local/lib/python3.10/dist-packages (from pycaret[full]) (7.34.0)

Requirement already satisfied: ipywidgets>=7.6.5 in

/usr/local/lib/python3.10/dist-packages (from pycaret[full]) (7.7.1)

Requirement already satisfied: tqdm>=4.62.0 in

/usr/local/lib/python3.10/dist-packages (from pycaret[full]) (4.66.5)

Requirement already satisfied: numpy<1.27,>=1.21 in

/usr/local/lib/python3.10/dist-packages (from pycaret[full]) (1.26.4)

Requirement already satisfied: pandas<2.2.0 in

/usr/local/lib/python3.10/dist-packages (from pycaret[full]) (2.1.4)

Requirement already satisfied: jinja2>=3 in

/usr/local/lib/python3.10/dist-packages (from pycaret[full]) (3.1.4)

Requirement already satisfied: scipy<=1.11.4,>=1.6.1 in

/usr/local/lib/python3.10/dist-packages (from pycaret[full]) (1.11.4)

Requirement already satisfied: joblib<1.4,>=1.2.0 in

/usr/local/lib/python3.10/dist-packages (from pycaret[full]) (1.3.2)

Requirement already satisfied: scikit-learn>1.4.0 in

/usr/local/lib/python3.10/dist-packages (from pycaret[full]) (1.4.2)

Requirement already satisfied: pyod>=1.1.3 in

/usr/local/lib/python3.10/dist-packages (from pycaret[full]) (2.0.2)

Requirement already satisfied: imbalanced-learn>=0.12.0 in

/usr/local/lib/python3.10/dist-packages (from pycaret[full]) (0.12.3)

Requirement already satisfied: category-encoders>=2.4.0 in

/usr/local/lib/python3.10/dist-packages (from pycaret[full]) (2.6.3)

Requirement already satisfied: lightgbm>=3.0.0 in

/usr/local/lib/python3.10/dist-packages (from pycaret[full]) (4.5.0)

Requirement already satisfied: numba>=0.55.0 in

/usr/local/lib/python3.10/dist-packages (from pycaret[full]) (0.60.0)

Requirement already satisfied: requests>=2.27.1 in
/usr/local/lib/python3.10/dist-packages (from pycaret[full]) (2.32.3)
Requirement already satisfied: psutil>=5.9.0 in
/usr/local/lib/python3.10/dist-packages (from pycaret[full]) (5.9.5)
Requirement already satisfied: markupsafe>=2.0.1 in
/usr/local/lib/python3.10/dist-packages (from pycaret[full]) (2.1.5)
Requirement already satisfied: importlib-metadata>=4.12.0 in
/usr/local/lib/python3.10/dist-packages (from pycaret[full]) (8.4.0)
Requirement already satisfied: nbformat>=4.2.0 in
/usr/local/lib/python3.10/dist-packages (from pycaret[full]) (5.10.4)
Requirement already satisfied: cloudpickle in
/usr/local/lib/python3.10/dist-packages (from pycaret[full]) (2.2.1)
Requirement already satisfied: deprecation>=2.1.0 in
/usr/local/lib/python3.10/dist-packages (from pycaret[full]) (2.1.0)
Requirement already satisfied: xxhash in
/usr/local/lib/python3.10/dist-packages (from pycaret[full]) (3.5.0)
Requirement already satisfied: matplotlib<3.8.0 in
/usr/local/lib/python3.10/dist-packages (from pycaret[full]) (3.7.1)
Requirement already satisfied: scikit-plot>=0.3.7 in
/usr/local/lib/python3.10/dist-packages (from pycaret[full]) (0.3.7)
Requirement already satisfied: yellowbrick>=1.4 in
/usr/local/lib/python3.10/dist-packages (from pycaret[full]) (1.5)
Requirement already satisfied: plotly>=5.14.0 in
/usr/local/lib/python3.10/dist-packages (from pycaret[full]) (5.15.0)
Requirement already satisfied: kaleido>=0.2.1 in
/usr/local/lib/python3.10/dist-packages (from pycaret[full]) (0.2.1)
Requirement already satisfied: schemdraw==0.15 in
/usr/local/lib/python3.10/dist-packages (from pycaret[full]) (0.15)
Requirement already satisfied: plotly-resampler>=0.8.3.1 in
/usr/local/lib/python3.10/dist-packages (from pycaret[full]) (0.10.0)
Requirement already satisfied: statsmodels>=0.12.1 in
/usr/local/lib/python3.10/dist-packages (from pycaret[full]) (0.14.3)
Requirement already satisfied: sktime==0.26.0 in
/usr/local/lib/python3.10/dist-packages (from pycaret[full]) (0.26.0)
Requirement already satisfied: tbats>=1.1.3 in
/usr/local/lib/python3.10/dist-packages (from pycaret[full]) (1.1.3)
Requirement already satisfied: pmdarima>=2.0.4 in
/usr/local/lib/python3.10/dist-packages (from pycaret[full]) (2.0.4)
Requirement already satisfied: wurlitzer in
/usr/local/lib/python3.10/dist-packages (from pycaret[full]) (3.1.1)
Requirement already satisfied: shap~0.44.0 in
/usr/local/lib/python3.10/dist-packages (from pycaret[full]) (0.44.1)
Requirement already satisfied: interpret>=0.2.7 in
/usr/local/lib/python3.10/dist-packages (from pycaret[full]) (0.6.3)
Requirement already satisfied: umap-learn>=0.5.2 in
/usr/local/lib/python3.10/dist-packages (from pycaret[full]) (0.5.6)
Requirement already satisfied: pyyaml in
/usr/local/lib/python3.10/dist-packages (from pycaret[full]) (6.0.2)
Requirement already satisfied: ydata-profiling>=4.3.1 in

/usr/local/lib/python3.10/dist-packages (from pycaret[full]) (4.10.0)
Requirement already satisfied: explainerdashboard>=0.3.8 in
/usr/local/lib/python3.10/dist-packages (from pycaret[full]) (0.4.7)
Requirement already satisfied: fairlearn==0.7.0 in
/usr/local/lib/python3.10/dist-packages (from pycaret[full]) (0.7.0)
Requirement already satisfied: kmodes>=0.11.1 in
/usr/local/lib/python3.10/dist-packages (from pycaret[full]) (0.12.2)
Requirement already satisfied: mlxtend>=0.19.0 in
/usr/local/lib/python3.10/dist-packages (from pycaret[full]) (0.23.1)
Requirement already satisfied: statsforecast<1.6.0,>=0.5.5 in
/usr/local/lib/python3.10/dist-packages (from pycaret[full]) (1.5.0)
Requirement already satisfied: hyperopt>=0.2.7 in
/usr/local/lib/python3.10/dist-packages (from pycaret[full]) (0.2.7)
Requirement already satisfied: optuna>=3.0.0 in
/usr/local/lib/python3.10/dist-packages (from pycaret[full]) (4.0.0)
Requirement already satisfied: optuna-integration in
/usr/local/lib/python3.10/dist-packages (from pycaret[full]) (4.0.0)
Requirement already satisfied: scikit-optimize>=0.9.0 in
/usr/local/lib/python3.10/dist-packages (from pycaret[full]) (0.10.2)
Requirement already satisfied: mlflow>=2.0.0 in
/usr/local/lib/python3.10/dist-packages (from pycaret[full]) (2.16.2)
Requirement already satisfied: gradio>=3.50.2 in
/usr/local/lib/python3.10/dist-packages (from pycaret[full]) (4.44.0)
Requirement already satisfied: boto3>=1.24.56 in
/usr/local/lib/python3.10/dist-packages (from pycaret[full]) (1.35.23)
Requirement already satisfied: fastapi in
/usr/local/lib/python3.10/dist-packages (from pycaret[full]) (0.115.0)
Requirement already satisfied: uvicorn>=0.17.6 in
/usr/local/lib/python3.10/dist-packages (from pycaret[full]) (0.30.6)
Requirement already satisfied: m2cgen>=0.9.0 in
/usr/local/lib/python3.10/dist-packages (from pycaret[full]) (0.10.0)
Requirement already satisfied: evidently~=0.4.16 in
/usr/local/lib/python3.10/dist-packages (from pycaret[full]) (0.4.37)
Requirement already satisfied: dask>=2024.4.1 in
/usr/local/lib/python3.10/dist-packages (from pycaret[full])
(2024.8.0)
Requirement already satisfied: distributed>=2024.4.1 in
/usr/local/lib/python3.10/dist-packages (from pycaret[full])
(2024.8.0)
Requirement already satisfied: fugue~=0.8.0 in
/usr/local/lib/python3.10/dist-packages (from pycaret[full]) (0.8.7)
Requirement already satisfied: flask in
/usr/local/lib/python3.10/dist-packages (from pycaret[full]) (2.2.5)
Requirement already satisfied: Werkzeug<3.0,>=2.2 in
/usr/local/lib/python3.10/dist-packages (from pycaret[full]) (2.3.8)
Requirement already satisfied: pytest<8.0.0 in
/usr/local/lib/python3.10/dist-packages (from pycaret[full]) (7.4.4)
Requirement already satisfied: moto<5.0.0 in
/usr/local/lib/python3.10/dist-packages (from pycaret[full]) (4.2.14)

Requirement already satisfied: dash[testing] in
/usr/local/lib/python3.10/dist-packages (from pycaret[full]) (2.18.1)
Requirement already satisfied: scikit-learn-intelex>=2023.0.1 in
/usr/local/lib/python3.10/dist-packages (from pycaret[full])
(2024.7.0)
Requirement already satisfied: catboost>=0.23.2 in
/usr/local/lib/python3.10/dist-packages (from pycaret[full]) (1.2.7)
Requirement already satisfied: tune-sklearn>=0.2.1 in
/usr/local/lib/python3.10/dist-packages (from pycaret[full]) (0.5.0)
Requirement already satisfied: ray>=1.0.0 in
/usr/local/lib/python3.10/dist-packages (from ray[tune]>=1.0.0;
(python_version != "3.11" and platform_system != "Windows") and extra
== "full"->pycaret[full]) (2.36.0)
Requirement already satisfied: xgboost>=1.1.0 in
/usr/local/lib/python3.10/dist-packages (from pycaret[full]) (2.1.1)
Requirement already satisfied: packaging in
/usr/local/lib/python3.10/dist-packages (from sktime==0.26.0-
>pycaret[full]) (24.1)
Requirement already satisfied: scikit-base<0.8.0 in
/usr/local/lib/python3.10/dist-packages (from sktime==0.26.0-
>pycaret[full]) (0.7.8)
Requirement already satisfied: botocore<1.36.0,>=1.35.23 in
/usr/local/lib/python3.10/dist-packages (from boto3>=1.24.56-
>pycaret[full]) (1.35.23)
Requirement already satisfied: jmespath<2.0.0,>=0.7.1 in
/usr/local/lib/python3.10/dist-packages (from boto3>=1.24.56-
>pycaret[full]) (1.0.1)
Requirement already satisfied: s3transfer<0.11.0,>=0.10.0 in
/usr/local/lib/python3.10/dist-packages (from boto3>=1.24.56-
>pycaret[full]) (0.10.2)
Requirement already satisfied: graphviz in
/usr/local/lib/python3.10/dist-packages (from catboost>=0.23.2-
>pycaret[full]) (0.20.3)
Requirement already satisfied: six in /usr/local/lib/python3.10/dist-
packages (from catboost>=0.23.2->pycaret[full]) (1.16.0)
Requirement already satisfied: patsy>=0.5.1 in
/usr/local/lib/python3.10/dist-packages (from category-
encoders>=2.4.0->pycaret[full]) (0.5.6)
Requirement already satisfied: click>=8.1 in
/usr/local/lib/python3.10/dist-packages (from dask>=2024.4.1-
>pycaret[full]) (8.1.7)
Requirement already satisfied: fsspec>=2021.09.0 in
/usr/local/lib/python3.10/dist-packages (from dask>=2024.4.1-
>pycaret[full]) (2024.6.1)
Requirement already satisfied: partd>=1.4.0 in
/usr/local/lib/python3.10/dist-packages (from dask>=2024.4.1-
>pycaret[full]) (1.4.2)
Requirement already satisfied: toolz>=0.10.0 in
/usr/local/lib/python3.10/dist-packages (from dask>=2024.4.1-

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>pycaret[full]) (0.12.1)
Requirement already satisfied: locket>=1.0.0 in
/usr/local/lib/python3.10/dist-packages (from distributed>=2024.4.1-
>pycaret[full]) (1.0.0)
Requirement already satisfied: msgpack>=1.0.0 in
/usr/local/lib/python3.10/dist-packages (from distributed>=2024.4.1-
>pycaret[full]) (1.0.8)
Requirement already satisfied: sortedcontainers>=2.0.5 in
/usr/local/lib/python3.10/dist-packages (from distributed>=2024.4.1-
>pycaret[full]) (2.4.0)
Requirement already satisfied: tblib>=1.6.0 in
/usr/local/lib/python3.10/dist-packages (from distributed>=2024.4.1-
>pycaret[full]) (3.0.0)
Requirement already satisfied: tornado>=6.0.4 in
/usr/local/lib/python3.10/dist-packages (from distributed>=2024.4.1-
>pycaret[full]) (6.3.3)
Requirement already satisfied: urllib3>=1.24.3 in
/usr/local/lib/python3.10/dist-packages (from distributed>=2024.4.1-
>pycaret[full]) (2.0.7)
Requirement already satisfied: zict>=3.0.0 in
/usr/local/lib/python3.10/dist-packages (from distributed>=2024.4.1-
>pycaret[full]) (3.0.0)
Requirement already satisfied: nltk>=3.6.7 in
/usr/local/lib/python3.10/dist-packages (from evidently~=0.4.16-
>pycaret[full]) (3.8.1)
Requirement already satisfied: pydantic>=1.10.13 in
/usr/local/lib/python3.10/dist-packages (from evidently~=0.4.16-
>pycaret[full]) (2.9.2)
Requirement already satisfied: litestar>=2.8.3 in
/usr/local/lib/python3.10/dist-packages (from evidently~=0.4.16-
>pycaret[full]) (2.11.0)
Requirement already satisfied: typing-inspect>=0.9.0 in
/usr/local/lib/python3.10/dist-packages (from evidently~=0.4.16-
>pycaret[full]) (0.9.0)
Requirement already satisfied: watchdog>=3.0.0 in
/usr/local/lib/python3.10/dist-packages (from evidently~=0.4.16-
>pycaret[full]) (5.0.2)
Requirement already satisfied: typer>=0.3 in
/usr/local/lib/python3.10/dist-packages (from evidently~=0.4.16-
>pycaret[full]) (0.12.5)
Requirement already satisfied: rich>=13 in
/usr/local/lib/python3.10/dist-packages (from evidently~=0.4.16-
>pycaret[full]) (13.8.1)
Requirement already satisfied: iterative-telemetry>=0.0.5 in
/usr/local/lib/python3.10/dist-packages (from evidently~=0.4.16-
>pycaret[full]) (0.0.9)
Requirement already satisfied: dynaconf>=3.2.4 in
/usr/local/lib/python3.10/dist-packages (from evidently~=0.4.16-
>pycaret[full]) (3.2.6)
```

Requirement already satisfied: certifi>=2024.7.4 in
/usr/local/lib/python3.10/dist-packages (from evidently~=0.4.16-
>pycaret[full]) (2024.8.30)

Requirement already satisfied: ujson>=5.4.0 in
/usr/local/lib/python3.10/dist-packages (from evidently~=0.4.16-
>pycaret[full]) (5.10.0)

Requirement already satisfied: cryptography>=43.0.1 in
/usr/local/lib/python3.10/dist-packages (from evidently~=0.4.16-
>pycaret[full]) (43.0.1)

Requirement already satisfied: dash-auth in
/usr/local/lib/python3.10/dist-packages (from
explainerdashboard>=0.3.8->pycaret[full]) (2.3.0)

Requirement already satisfied: dash-bootstrap-components>=1 in
/usr/local/lib/python3.10/dist-packages (from
explainerdashboard>=0.3.8->pycaret[full]) (1.6.0)

Requirement already satisfied: dtreeviz>=2.1 in
/usr/local/lib/python3.10/dist-packages (from
explainerdashboard>=0.3.8->pycaret[full]) (2.2.2)

Requirement already satisfied: flask-simplelogin in
/usr/local/lib/python3.10/dist-packages (from
explainerdashboard>=0.3.8->pycaret[full]) (0.1.3)

Requirement already satisfied: Flask-WTF>=1.1 in
/usr/local/lib/python3.10/dist-packages (from
explainerdashboard>=0.3.8->pycaret[full]) (1.2.1)

Requirement already satisfied: jupyter-dash>=0.4.1 in
/usr/local/lib/python3.10/dist-packages (from
explainerdashboard>=0.3.8->pycaret[full]) (0.4.2)

Requirement already satisfied: oyaml in
/usr/local/lib/python3.10/dist-packages (from
explainerdashboard>=0.3.8->pycaret[full]) (1.0)

Requirement already satisfied: waitress in
/usr/local/lib/python3.10/dist-packages (from
explainerdashboard>=0.3.8->pycaret[full]) (3.0.0)

Requirement already satisfied: triad>=0.9.3 in
/usr/local/lib/python3.10/dist-packages (from fugue~=0.8.0-
>pycaret[full]) (0.9.8)

Requirement already satisfied: adagio>=0.2.4 in
/usr/local/lib/python3.10/dist-packages (from fugue~=0.8.0-
>pycaret[full]) (0.2.6)

Requirement already satisfied: qpd>=0.4.4 in
/usr/local/lib/python3.10/dist-packages (from fugue~=0.8.0-
>pycaret[full]) (0.4.4)

Requirement already satisfied: fugue-sql-antlr>=0.1.6 in
/usr/local/lib/python3.10/dist-packages (from fugue~=0.8.0-
>pycaret[full]) (0.2.2)

Requirement already satisfied: sqlglot in
/usr/local/lib/python3.10/dist-packages (from fugue~=0.8.0-
>pycaret[full]) (20.11.0)

Requirement already satisfied: aiofiles<24.0,>=22.0 in

```
/usr/local/lib/python3.10/dist-packages (from gradio>=3.50.2-
>pycaret[full]) (23.2.1)
Requirement already satisfied: anyio<5.0,>=3.0 in
/usr/local/lib/python3.10/dist-packages (from gradio>=3.50.2-
>pycaret[full]) (3.7.1)
Requirement already satisfied: ffmpeg in
/usr/local/lib/python3.10/dist-packages (from gradio>=3.50.2-
>pycaret[full]) (0.4.0)
Requirement already satisfied: gradio-client==1.3.0 in
/usr/local/lib/python3.10/dist-packages (from gradio>=3.50.2-
>pycaret[full]) (1.3.0)
Requirement already satisfied: httpx>=0.24.1 in
/usr/local/lib/python3.10/dist-packages (from gradio>=3.50.2-
>pycaret[full]) (0.27.2)
Requirement already satisfied: huggingface-hub>=0.19.3 in
/usr/local/lib/python3.10/dist-packages (from gradio>=3.50.2-
>pycaret[full]) (0.24.7)
Requirement already satisfied: importlib-resources<7.0,>=1.3 in
/usr/local/lib/python3.10/dist-packages (from gradio>=3.50.2-
>pycaret[full]) (6.4.5)
Requirement already satisfied: orjson~=3.0 in
/usr/local/lib/python3.10/dist-packages (from gradio>=3.50.2-
>pycaret[full]) (3.10.7)
Requirement already satisfied: pillow<11.0,>=8.0 in
/usr/local/lib/python3.10/dist-packages (from gradio>=3.50.2-
>pycaret[full]) (10.4.0)
Requirement already satisfied: pydub in
/usr/local/lib/python3.10/dist-packages (from gradio>=3.50.2-
>pycaret[full]) (0.25.1)
Requirement already satisfied: python-multipart>=0.0.9 in
/usr/local/lib/python3.10/dist-packages (from gradio>=3.50.2-
>pycaret[full]) (0.0.9)
Requirement already satisfied: ruff>=0.2.2 in
/usr/local/lib/python3.10/dist-packages (from gradio>=3.50.2-
>pycaret[full]) (0.6.6)
Requirement already satisfied: semantic-version~=2.0 in
/usr/local/lib/python3.10/dist-packages (from gradio>=3.50.2-
>pycaret[full]) (2.10.0)
Requirement already satisfied: tomlkit==0.12.0 in
/usr/local/lib/python3.10/dist-packages (from gradio>=3.50.2-
>pycaret[full]) (0.12.0)
Requirement already satisfied: typing-extensions~=4.0 in
/usr/local/lib/python3.10/dist-packages (from gradio>=3.50.2-
>pycaret[full]) (4.12.2)
Requirement already satisfied: websockets<13.0,>=10.0 in
/usr/local/lib/python3.10/dist-packages (from gradio-client==1.3.0-
>gradio>=3.50.2->pycaret[full]) (12.0)
Requirement already satisfied: starlette<0.39.0,>=0.37.2 in
/usr/local/lib/python3.10/dist-packages (from fastapi->pycaret[full])
```

(0.38.5)
Requirement already satisfied: networkx>=2.2 in
/usr/local/lib/python3.10/dist-packages (from hyperopt>=0.2.7-
>pycaret[full]) (3.3)
Requirement already satisfied: future in
/usr/local/lib/python3.10/dist-packages (from hyperopt>=0.2.7-
>pycaret[full]) (1.0.0)
Requirement already satisfied: py4j in /usr/local/lib/python3.10/dist-
packages (from hyperopt>=0.2.7->pycaret[full]) (0.10.9.7)
Requirement already satisfied: threadpoolctl>=2.0.0 in
/usr/local/lib/python3.10/dist-packages (from imbalanced-
learn>=0.12.0->pycaret[full]) (3.5.0)
Requirement already satisfied: zipp>=0.5 in
/usr/local/lib/python3.10/dist-packages (from importlib-
metadata>=4.12.0->pycaret[full]) (3.20.2)
Requirement already satisfied: interpret-core==0.6.3 in
/usr/local/lib/python3.10/dist-packages (from interpret-
core[aplr,dash,debug,linear,notebook,plotly,sensitivity,shap]==0.6.3-
>interpret>=0.2.7->pycaret[full]) (0.6.3)
Requirement already satisfied: SALib>=1.3.3 in
/usr/local/lib/python3.10/dist-packages (from interpret-
core[aplr,dash,debug,linear,notebook,plotly,sensitivity,shap]==0.6.3-
>interpret>=0.2.7->pycaret[full]) (1.5.1)
Requirement already satisfied: ipykernel>=4.10.0 in
/usr/local/lib/python3.10/dist-packages (from interpret-
core[aplr,dash,debug,linear,notebook,plotly,sensitivity,shap]==0.6.3-
>interpret>=0.2.7->pycaret[full]) (5.5.6)
Requirement already satisfied: dash-core-components>=1.0.0 in
/usr/local/lib/python3.10/dist-packages (from interpret-
core[aplr,dash,debug,linear,notebook,plotly,sensitivity,shap]==0.6.3-
>interpret>=0.2.7->pycaret[full]) (2.0.0)
Requirement already satisfied: dash-html-components>=1.0.0 in
/usr/local/lib/python3.10/dist-packages (from interpret-
core[aplr,dash,debug,linear,notebook,plotly,sensitivity,shap]==0.6.3-
>interpret>=0.2.7->pycaret[full]) (2.0.0)
Requirement already satisfied: dash-table>=4.1.0 in
/usr/local/lib/python3.10/dist-packages (from interpret-
core[aplr,dash,debug,linear,notebook,plotly,sensitivity,shap]==0.6.3-
>interpret>=0.2.7->pycaret[full]) (5.0.0)
Requirement already satisfied: dash-cytoscape>=0.1.1 in
/usr/local/lib/python3.10/dist-packages (from interpret-
core[aplr,dash,debug,linear,notebook,plotly,sensitivity,shap]==0.6.3-
>interpret>=0.2.7->pycaret[full]) (1.0.2)
Requirement already satisfied: gevent>=1.3.6 in
/usr/local/lib/python3.10/dist-packages (from interpret-
core[aplr,dash,debug,linear,notebook,plotly,sensitivity,shap]==0.6.3-
>interpret>=0.2.7->pycaret[full]) (24.2.1)
Requirement already satisfied: aplr>=10.5.1 in
/usr/local/lib/python3.10/dist-packages (from interpret-


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core[aplr,dash,debug,linear,notebook,plotly,sensitivity,shap]==0.6.3-
>interpret>=0.2.7->pycaret[full]) (10.6.3)
Requirement already satisfied: dill>=0.2.5 in
/usr/local/lib/python3.10/dist-packages (from interpret-
core[aplr,dash,debug,linear,notebook,plotly,sensitivity,shap]==0.6.3-
>interpret>=0.2.7->pycaret[full]) (0.3.8)
Requirement already satisfied: setuptools>=18.5 in
/usr/local/lib/python3.10/dist-packages (from ipython>=5.5.0-
>pycaret[full]) (71.0.4)
Requirement already satisfied: jedi>=0.16 in
/usr/local/lib/python3.10/dist-packages (from ipython>=5.5.0-
>pycaret[full]) (0.19.1)
Requirement already satisfied: decorator in
/usr/local/lib/python3.10/dist-packages (from ipython>=5.5.0-
>pycaret[full]) (4.4.2)
Requirement already satisfied: pickleshare in
/usr/local/lib/python3.10/dist-packages (from ipython>=5.5.0-
>pycaret[full]) (0.7.5)
Requirement already satisfied: traitlets>=4.2 in
/usr/local/lib/python3.10/dist-packages (from ipython>=5.5.0-
>pycaret[full]) (5.7.1)
Requirement already satisfied: prompt-toolkit!=3.0.0,!
=3.0.1,<3.1.0,>=2.0.0 in /usr/local/lib/python3.10/dist-packages (from
ipython>=5.5.0->pycaret[full]) (3.0.47)
Requirement already satisfied: pygments in
/usr/local/lib/python3.10/dist-packages (from ipython>=5.5.0-
>pycaret[full]) (2.18.0)
Requirement already satisfied: backcall in
/usr/local/lib/python3.10/dist-packages (from ipython>=5.5.0-
>pycaret[full]) (0.2.0)
Requirement already satisfied: matplotlib-inline in
/usr/local/lib/python3.10/dist-packages (from ipython>=5.5.0-
>pycaret[full]) (0.1.7)
Requirement already satisfied: pexpect>4.3 in
/usr/local/lib/python3.10/dist-packages (from ipython>=5.5.0-
>pycaret[full]) (4.9.0)
Requirement already satisfied: ipython-genutils~=0.2.0 in
/usr/local/lib/python3.10/dist-packages (from ipywidgets>=7.6.5-
>pycaret[full]) (0.2.0)
Requirement already satisfied: widgetsnbextension~=3.6.0 in
/usr/local/lib/python3.10/dist-packages (from ipywidgets>=7.6.5-
>pycaret[full]) (3.6.9)
Requirement already satisfied: jupyterlab-widgets>=1.0.0 in
/usr/local/lib/python3.10/dist-packages (from ipywidgets>=7.6.5-
>pycaret[full]) (3.0.13)
Requirement already satisfied: contourpy>=1.0.1 in
/usr/local/lib/python3.10/dist-packages (from matplotlib<3.8.0-
>pycaret[full]) (1.3.0)
Requirement already satisfied: cycler>=0.10 in
```

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/usr/local/lib/python3.10/dist-packages (from matplotlib<3.8.0-
>pycaret[full]) (0.12.1)
Requirement already satisfied: fonttools>=4.22.0 in
/usr/local/lib/python3.10/dist-packages (from matplotlib<3.8.0-
>pycaret[full]) (4.53.1)
Requirement already satisfied: kiwisolver>=1.0.1 in
/usr/local/lib/python3.10/dist-packages (from matplotlib<3.8.0-
>pycaret[full]) (1.4.7)
Requirement already satisfied: pyparsing>=2.3.1 in
/usr/local/lib/python3.10/dist-packages (from matplotlib<3.8.0-
>pycaret[full]) (3.1.4)
Requirement already satisfied: python-dateutil>=2.7 in
/usr/local/lib/python3.10/dist-packages (from matplotlib<3.8.0-
>pycaret[full]) (2.8.2)
Requirement already satisfied: mlflow-skinny==2.16.2 in
/usr/local/lib/python3.10/dist-packages (from mlflow>=2.0.0-
>pycaret[full]) (2.16.2)
Requirement already satisfied: alembic!=1.10.0,<2 in
/usr/local/lib/python3.10/dist-packages (from mlflow>=2.0.0-
>pycaret[full]) (1.13.2)
Requirement already satisfied: docker<8,>=4.0.0 in
/usr/local/lib/python3.10/dist-packages (from mlflow>=2.0.0-
>pycaret[full]) (7.1.0)
Requirement already satisfied: graphene<4 in
/usr/local/lib/python3.10/dist-packages (from mlflow>=2.0.0-
>pycaret[full]) (3.3)
Requirement already satisfied: markdown<4,>=3.3 in
/usr/local/lib/python3.10/dist-packages (from mlflow>=2.0.0-
>pycaret[full]) (3.7)
Requirement already satisfied: pyarrow<18,>=4.0.0 in
/usr/local/lib/python3.10/dist-packages (from mlflow>=2.0.0-
>pycaret[full]) (14.0.2)
Requirement already satisfied: sqlalchemy<3,>=1.4.0 in
/usr/local/lib/python3.10/dist-packages (from mlflow>=2.0.0-
>pycaret[full]) (2.0.35)
Requirement already satisfied: gunicorn<24 in
/usr/local/lib/python3.10/dist-packages (from mlflow>=2.0.0-
>pycaret[full]) (23.0.0)
Requirement already satisfied: cachetools<6,>=5.0.0 in
/usr/local/lib/python3.10/dist-packages (from mlflow-skinny==2.16.2-
>mlflow>=2.0.0->pycaret[full]) (5.5.0)
Requirement already satisfied: databricks-sdk<1,>=0.20.0 in
/usr/local/lib/python3.10/dist-packages (from mlflow-skinny==2.16.2-
>mlflow>=2.0.0->pycaret[full]) (0.32.3)
Requirement already satisfied: gitpython<4,>=3.1.9 in
/usr/local/lib/python3.10/dist-packages (from mlflow-skinny==2.16.2-
>mlflow>=2.0.0->pycaret[full]) (3.1.43)
Requirement already satisfied: opentelemetry-api<3,>=1.9.0 in
/usr/local/lib/python3.10/dist-packages (from mlflow-skinny==2.16.2-
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>mlflow>=2.0.0->pycaret[full]) (1.27.0)
Requirement already satisfied: opentelemetry-sdk<3,>=1.9.0 in
/usr/local/lib/python3.10/dist-packages (from mlflow-skinny==2.16.2-
>mlflow>=2.0.0->pycaret[full]) (1.27.0)
Requirement already satisfied: protobuf<6,>=3.12.0 in
/usr/local/lib/python3.10/dist-packages (from mlflow-skinny==2.16.2-
>mlflow>=2.0.0->pycaret[full]) (3.20.3)
Requirement already satisfied: sqlparse<1,>=0.4.0 in
/usr/local/lib/python3.10/dist-packages (from mlflow-skinny==2.16.2-
>mlflow>=2.0.0->pycaret[full]) (0.5.1)
Requirement already satisfied: itsdangerous>=2.0 in
/usr/local/lib/python3.10/dist-packages (from flask->pycaret[full])
(2.2.0)
Requirement already satisfied: xmltodict in
/usr/local/lib/python3.10/dist-packages (from moto<5.0.0-
>pycaret[full]) (0.13.0)
Requirement already satisfied: responses>=0.13.0 in
/usr/local/lib/python3.10/dist-packages (from moto<5.0.0-
>pycaret[full]) (0.25.3)
Requirement already satisfied: fastjsonschema>=2.15 in
/usr/local/lib/python3.10/dist-packages (from nbformat>=4.2.0-
>pycaret[full]) (2.20.0)
Requirement already satisfied: jsonschema>=2.6 in
/usr/local/lib/python3.10/dist-packages (from nbformat>=4.2.0-
>pycaret[full]) (4.23.0)
Requirement already satisfied: jupyter-core!=5.0.*,>=4.12 in
/usr/local/lib/python3.10/dist-packages (from nbformat>=4.2.0-
>pycaret[full]) (5.7.2)
Requirement already satisfied: llvmlite<0.44,>=0.43.0dev0 in
/usr/local/lib/python3.10/dist-packages (from numba>=0.55.0-
>pycaret[full]) (0.43.0)
Requirement already satisfied: colorlog in
/usr/local/lib/python3.10/dist-packages (from optuna>=3.0.0-
>pycaret[full]) (6.8.2)
Requirement already satisfied: pytz>=2020.1 in
/usr/local/lib/python3.10/dist-packages (from pandas<2.2.0-
>pycaret[full]) (2024.2)
Requirement already satisfied: tzdata>=2022.1 in
/usr/local/lib/python3.10/dist-packages (from pandas<2.2.0-
>pycaret[full]) (2024.1)
Requirement already satisfied: tenacity>=6.2.0 in
/usr/local/lib/python3.10/dist-packages (from plotly>=5.14.0-
>pycaret[full]) (9.0.0)
Requirement already satisfied: tsdownsample>=0.1.3 in
/usr/local/lib/python3.10/dist-packages (from plotly-
resampler>=0.8.3.1->pycaret[full]) (0.1.3)
Requirement already satisfied: Cython!=0.29.18,!0.29.31,>=0.29 in
/usr/local/lib/python3.10/dist-packages (from pmdarima>=2.0.4-
>pycaret[full]) (3.0.11)
Requirement already satisfied: iniconfig in
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/usr/local/lib/python3.10/dist-packages (from pytest<8.0.0-
>pycaret[full]) (2.0.0)
Requirement already satisfied: pluggy<2.0,>=0.12 in
/usr/local/lib/python3.10/dist-packages (from pytest<8.0.0-
>pycaret[full]) (1.5.0)
Requirement already satisfied: exceptiongroup>=1.0.0rc8 in
/usr/local/lib/python3.10/dist-packages (from pytest<8.0.0-
>pycaret[full]) (1.2.2)
Requirement already satisfied: tomli>=1.0.0 in
/usr/local/lib/python3.10/dist-packages (from pytest<8.0.0-
>pycaret[full]) (2.0.1)
Requirement already satisfied: filelock in
/usr/local/lib/python3.10/dist-packages (from ray>=1.0.0-
>ray[tune]>=1.0.0; (python_version != "3.11" and platform_system !=
"Windows") and extra == "full"->pycaret[full]) (3.16.0)
Requirement already satisfied: aiosignal in
/usr/local/lib/python3.10/dist-packages (from ray>=1.0.0-
>ray[tune]>=1.0.0; (python_version != "3.11" and platform_system !=
"Windows") and extra == "full"->pycaret[full]) (1.3.1)
Requirement already satisfied: frozenlist in
/usr/local/lib/python3.10/dist-packages (from ray>=1.0.0-
>ray[tune]>=1.0.0; (python_version != "3.11" and platform_system !=
"Windows") and extra == "full"->pycaret[full]) (1.4.1)
Requirement already satisfied: tensorboardX>=1.9 in
/usr/local/lib/python3.10/dist-packages (from ray[tune]>=1.0.0;
(python_version != "3.11" and platform_system != "Windows") and extra
== "full"->pycaret[full]) (2.6.2.2)
Requirement already satisfied: charset-normalizer<4,>=2 in
/usr/local/lib/python3.10/dist-packages (from requests>=2.27.1-
>pycaret[full]) (3.3.2)
Requirement already satisfied: idna<4,>=2.5 in
/usr/local/lib/python3.10/dist-packages (from requests>=2.27.1-
>pycaret[full]) (3.10)
Requirement already satisfied: daal4py==2024.7.0 in
/usr/local/lib/python3.10/dist-packages (from scikit-learn-
intelix>=2023.0.1->pycaret[full]) (2024.7.0)
Requirement already satisfied: daal==2024.7.0 in
/usr/local/lib/python3.10/dist-packages (from daal4py==2024.7.0-
>scikit-learn-intelix>=2023.0.1->pycaret[full]) (2024.7.0)
Requirement already satisfied: tbb==2021.* in
/usr/local/lib/python3.10/dist-packages (from daal==2024.7.0-
>daal4py==2024.7.0->scikit-learn-intelix>=2023.0.1->pycaret[full])
(2021.13.1)
Requirement already satisfied: pyaml>=16.9 in
/usr/local/lib/python3.10/dist-packages (from scikit-optimize>=0.9.0-
>pycaret[full]) (24.7.0)
Requirement already satisfied: slicer==0.0.7 in
/usr/local/lib/python3.10/dist-packages (from shap~0.44.0-
>pycaret[full]) (0.0.7)
```

Requirement already satisfied: pynndescent>=0.5 in
/usr/local/lib/python3.10/dist-packages (from umap-learn>=0.5.2-
>pycaret[full]) (0.5.13)

Requirement already satisfied: h11>=0.8 in
/usr/local/lib/python3.10/dist-packages (from uvicorn>=0.17.6-
>pycaret[full]) (0.14.0)

Requirement already satisfied: nvidia-nccl-cu12 in
/usr/local/lib/python3.10/dist-packages (from xgboost>=1.1.0-
>pycaret[full]) (2.23.4)

Requirement already satisfied: visions<0.7.7,>=0.7.5 in
/usr/local/lib/python3.10/dist-packages (from
visions[type_image_path]<0.7.7,>=0.7.5->ydata-profiling>=4.3.1-
>pycaret[full]) (0.7.6)

Requirement already satisfied: htmlmin==0.1.12 in
/usr/local/lib/python3.10/dist-packages (from ydata-profiling>=4.3.1-
>pycaret[full]) (0.1.12)

Requirement already satisfied: phik<0.13,>=0.11.1 in
/usr/local/lib/python3.10/dist-packages (from ydata-profiling>=4.3.1-
>pycaret[full]) (0.12.4)

Requirement already satisfied: seaborn<0.14,>=0.10.1 in
/usr/local/lib/python3.10/dist-packages (from ydata-profiling>=4.3.1-
>pycaret[full]) (0.13.1)

Requirement already satisfied: multimethod<2,>=1.4 in
/usr/local/lib/python3.10/dist-packages (from ydata-profiling>=4.3.1-
>pycaret[full]) (1.12)

Requirement already satisfied: typeguard<5,>=3 in
/usr/local/lib/python3.10/dist-packages (from ydata-profiling>=4.3.1-
>pycaret[full]) (4.3.0)

Requirement already satisfied: imagehash==4.3.1 in
/usr/local/lib/python3.10/dist-packages (from ydata-profiling>=4.3.1-
>pycaret[full]) (4.3.1)

Requirement already satisfied: wordcloud>=1.9.3 in
/usr/local/lib/python3.10/dist-packages (from ydata-profiling>=4.3.1-
>pycaret[full]) (1.9.3)

Requirement already satisfied: dacite>=1.8 in
/usr/local/lib/python3.10/dist-packages (from ydata-profiling>=4.3.1-
>pycaret[full]) (1.8.1)

Requirement already satisfied: PyWavelets in
/usr/local/lib/python3.10/dist-packages (from imagehash==4.3.1->ydata-
profiling>=4.3.1->pycaret[full]) (1.7.0)

Requirement already satisfied: retrying in
/usr/local/lib/python3.10/dist-packages (from dash[testing]; extra ==
"full"->pycaret[full]) (1.3.4)

Requirement already satisfied: nest-asyncio in
/usr/local/lib/python3.10/dist-packages (from dash[testing]; extra ==
"full"->pycaret[full]) (1.6.0)

Requirement already satisfied: beautifulsoup4>=4.8.2 in
/usr/local/lib/python3.10/dist-packages (from dash[testing]; extra ==
"full"->pycaret[full]) (4.12.3)

Requirement already satisfied: lxml<=4.6.2 in
/usr/local/lib/python3.10/dist-packages (from dash[testing]; extra ==
"full"->pycaret[full]) (4.9.4)

Requirement already satisfied: percy<=2.0.2 in
/usr/local/lib/python3.10/dist-packages (from dash[testing]; extra ==
"full"->pycaret[full]) (2.0.2)

Requirement already satisfied: selenium<=4.2.0,>=3.141.0 in
/usr/local/lib/python3.10/dist-packages (from dash[testing]; extra ==
"full"->pycaret[full]) (3.141.0)

Requirement already satisfied: multiprocessing<=0.70.12 in
/usr/local/lib/python3.10/dist-packages (from dash[testing]; extra ==
"full"->pycaret[full]) (0.70.16)

Requirement already satisfied: dash-testing-stub<=0.0.2 in
/usr/local/lib/python3.10/dist-packages (from dash[testing]; extra ==
"full"->pycaret[full]) (0.0.2)

Requirement already satisfied: Mako in /usr/local/lib/python3.10/dist-
packages (from alembic!=1.10.0,<2->mlflow<=2.0.0->pycaret[full])
(1.3.5)

Requirement already satisfied: sniffio<=1.1 in
/usr/local/lib/python3.10/dist-packages (from anyio<5.0,>=3.0-
>gradio<=3.50.2->pycaret[full]) (1.3.1)

Requirement already satisfied: soupsieve<1.2 in
/usr/local/lib/python3.10/dist-packages (from beautifulsoup4<=4.8.2-
>dash[testing]; extra == "full"->pycaret[full]) (2.6)

Requirement already satisfied: cffi<=1.12 in
/usr/local/lib/python3.10/dist-packages (from cryptography<=43.0.1-
>evidently~<0.4.16->pycaret[full]) (1.17.1)

Requirement already satisfied: dask-expr<1.2,>=1.1 in
/usr/local/lib/python3.10/dist-packages (from
dask[dataframe,distributed]<=2023.5.0; extra == "dask"->fugue[dask];
extra == "full"->pycaret[full]) (1.1.10)

Requirement already satisfied: colour in
/usr/local/lib/python3.10/dist-packages (from dtreeviz<=2.1-
>explainerdashboard<=0.3.8->pycaret[full]) (0.1.5)

Requirement already satisfied: wtforms in
/usr/local/lib/python3.10/dist-packages (from Flask-WTF<=1.1-
>explainerdashboard<=0.3.8->pycaret[full]) (3.1.2)

Requirement already satisfied: antlr4-python3-runtime<4.12 in
/usr/local/lib/python3.10/dist-packages (from fugue-sql-antlr<=0.1.6-
>fugue~<0.8.0->pycaret[full]) (4.11.1)

Requirement already satisfied: graphql-core<3.3,>=3.1 in
/usr/local/lib/python3.10/dist-packages (from graphene<4-
>mlflow<=2.0.0->pycaret[full]) (3.2.4)

Requirement already satisfied: graphql-relay<3.3,>=3.1 in
/usr/local/lib/python3.10/dist-packages (from graphene<4-
>mlflow<=2.0.0->pycaret[full]) (3.2.0)

Requirement already satisfied: aniso8601<10,>=8 in
/usr/local/lib/python3.10/dist-packages (from graphene<4-
>mlflow<=2.0.0->pycaret[full]) (9.0.1)

Requirement already satisfied: httpcore==1.* in
/usr/local/lib/python3.10/dist-packages (from httpx>=0.24.1-
>gradio>=3.50.2->pycaret[full]) (1.0.5)

Requirement already satisfied: jupyter-client in
/usr/local/lib/python3.10/dist-packages (from ipykernel>=4.10.0-
>interpret-
core[aplr,dash,debug,linear,notebook,plotly,sensitivity,shap]==0.6.3-
>interpret>=0.2.7->pycaret[full]) (6.1.12)

Requirement already satisfied: appdirs in
/usr/local/lib/python3.10/dist-packages (from iterative-
telemetry>=0.0.5->evidently~=0.4.16->pycaret[full]) (1.4.4)

Requirement already satisfied: distro in /usr/lib/python3/dist-
packages (from iterative-telemetry>=0.0.5->evidently~=0.4.16-
>pycaret[full]) (1.7.0)

Requirement already satisfied: parso<0.9.0,>=0.8.3 in
/usr/local/lib/python3.10/dist-packages (from jedi>=0.16-
>ipython>=5.5.0->pycaret[full]) (0.8.4)

Requirement already satisfied: attrs>=22.2.0 in
/usr/local/lib/python3.10/dist-packages (from jsonschema>=2.6-
>nbformat>=4.2.0->pycaret[full]) (24.2.0)

Requirement already satisfied: jsonschema-specifications>=2023.03.6 in
/usr/local/lib/python3.10/dist-packages (from jsonschema>=2.6-
>nbformat>=4.2.0->pycaret[full]) (2023.12.1)

Requirement already satisfied: referencing>=0.28.4 in
/usr/local/lib/python3.10/dist-packages (from jsonschema>=2.6-
>nbformat>=4.2.0->pycaret[full]) (0.35.1)

Requirement already satisfied: rpds-py>=0.7.1 in
/usr/local/lib/python3.10/dist-packages (from jsonschema>=2.6-
>nbformat>=4.2.0->pycaret[full]) (0.20.0)

Requirement already satisfied: platformdirs>=2.5 in
/usr/local/lib/python3.10/dist-packages (from jupyter-core!
=5.0.*,>=4.12->nbformat>=4.2.0->pycaret[full]) (4.3.4)

Requirement already satisfied: ansi2html in
/usr/local/lib/python3.10/dist-packages (from jupyter-dash>=0.4.1-
>explainerdashboard>=0.3.8->pycaret[full]) (1.9.2)

Requirement already satisfied: msgspec>=0.18.2 in
/usr/local/lib/python3.10/dist-packages (from litestar>=2.8.3-
>evidently~=0.4.16->pycaret[full]) (0.18.6)

Requirement already satisfied: multidict>=6.0.2 in
/usr/local/lib/python3.10/dist-packages (from litestar>=2.8.3-
>evidently~=0.4.16->pycaret[full]) (6.1.0)

Requirement already satisfied: polyfactory>=2.6.3 in
/usr/local/lib/python3.10/dist-packages (from litestar>=2.8.3-
>evidently~=0.4.16->pycaret[full]) (2.16.2)

Requirement already satisfied: rich-click in
/usr/local/lib/python3.10/dist-packages (from litestar>=2.8.3-
>evidently~=0.4.16->pycaret[full]) (1.8.3)

Requirement already satisfied: regex>=2021.8.3 in
/usr/local/lib/python3.10/dist-packages (from nltk>=3.6.7-

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>evidently~=0.4.16->pycaret[full]) (2024.9.11)
Requirement already satisfied: ptyprocess>=0.5 in
/usr/local/lib/python3.10/dist-packages (from pexpect>4.3-
>ipython>=5.5.0->pycaret[full]) (0.7.0)
Requirement already satisfied: wcwidth in
/usr/local/lib/python3.10/dist-packages (from prompt-toolkit!=3.0.0,!
=3.0.1,<3.1.0,>=2.0.0->ipython>=5.5.0->pycaret[full]) (0.2.13)
Requirement already satisfied: annotated-types>=0.6.0 in
/usr/local/lib/python3.10/dist-packages (from pydantic>=1.10.13-
>evidently~=0.4.16->pycaret[full]) (0.7.0)
Requirement already satisfied: pydantic-core==2.23.4 in
/usr/local/lib/python3.10/dist-packages (from pydantic>=1.10.13-
>evidently~=0.4.16->pycaret[full]) (2.23.4)
Requirement already satisfied: markdown-it-py>=2.2.0 in
/usr/local/lib/python3.10/dist-packages (from rich>=13-
>evidently~=0.4.16->pycaret[full]) (3.0.0)
Requirement already satisfied: greenlet!=0.4.17 in
/usr/local/lib/python3.10/dist-packages (from sqlalchemy<3,>=1.4.0-
>mlflow>=2.0.0->pycaret[full]) (3.1.0)
Requirement already satisfied: fs in /usr/local/lib/python3.10/dist-
packages (from triad>=0.9.3->fugue~=0.8.0->pycaret[full]) (2.4.16)
Requirement already satisfied: shellingham>=1.3.0 in
/usr/local/lib/python3.10/dist-packages (from typer>=0.3-
>evidently~=0.4.16->pycaret[full]) (1.5.4)
Requirement already satisfied: mypy-extensions>=0.3.0 in
/usr/local/lib/python3.10/dist-packages (from typing-inspect>=0.9.0-
>evidently~=0.4.16->pycaret[full]) (1.0.0)
Requirement already satisfied: httptools>=0.5.0 in
/usr/local/lib/python3.10/dist-packages (from
uvicorn[standard]>=0.22.0->evidently~=0.4.16->pycaret[full]) (0.6.1)
Requirement already satisfied: python-dotenv>=0.13 in
/usr/local/lib/python3.10/dist-packages (from
uvicorn[standard]>=0.22.0->evidently~=0.4.16->pycaret[full]) (1.0.1)
Requirement already satisfied: uvloop!=0.15.0,!0.15.1,>=0.14.0 in
/usr/local/lib/python3.10/dist-packages (from
uvicorn[standard]>=0.22.0->evidently~=0.4.16->pycaret[full]) (0.20.0)
Requirement already satisfied: watchfiles>=0.13 in
/usr/local/lib/python3.10/dist-packages (from
uvicorn[standard]>=0.22.0->evidently~=0.4.16->pycaret[full]) (0.24.0)
Requirement already satisfied: notebook>=4.4.1 in
/usr/local/lib/python3.10/dist-packages (from
widgetsnbextension~=3.6.0->ipywidgets>=7.6.5->pycaret[full]) (6.5.5)
Requirement already satisfied: pycparser in
/usr/local/lib/python3.10/dist-packages (from cffi>=1.12-
>cryptography>=43.0.1->evidently~=0.4.16->pycaret[full]) (2.22)
Requirement already satisfied: google-auth~=2.0 in
/usr/local/lib/python3.10/dist-packages (from databricks-
sdk<1,>=0.20.0->mlflow-skinny==2.16.2->mlflow>=2.0.0->pycaret[full])
(2.27.0)

```



```

Requirement already satisfied: zope.event in
/usr/local/lib/python3.10/dist-packages (from gevent>=1.3.6-
>interpret-
core[aplr,dash,debug,linear,notebook,plotly,sensitivity,shap]==0.6.3-
>interpret>=0.2.7->pycaret[full]) (5.0)
Requirement already satisfied: zope.interface in
/usr/local/lib/python3.10/dist-packages (from gevent>=1.3.6-
>interpret-
core[aplr,dash,debug,linear,notebook,plotly,sensitivity,shap]==0.6.3-
>interpret>=0.2.7->pycaret[full]) (7.0.3)
Requirement already satisfied: gitdb<5,>=4.0.1 in
/usr/local/lib/python3.10/dist-packages (from gitpython<4,>=3.1.9-
>mlflow-skinny==2.16.2->mlflow>=2.0.0->pycaret[full]) (4.0.11)
Requirement already satisfied: mdurl~=0.1 in
/usr/local/lib/python3.10/dist-packages (from markdown-it-py>=2.2.0-
>rich>=13->evidently~=0.4.16->pycaret[full]) (0.1.2)
Requirement already satisfied: pyzmq<25,>=17 in
/usr/local/lib/python3.10/dist-packages (from notebook>=4.4.1-
>widgetsnbextension~=3.6.0->ipywidgets>=7.6.5->pycaret[full]) (24.0.1)
Requirement already satisfied: argon2-cffi in
/usr/local/lib/python3.10/dist-packages (from notebook>=4.4.1-
>widgetsnbextension~=3.6.0->ipywidgets>=7.6.5->pycaret[full]) (23.1.0)
Requirement already satisfied: nbconvert>=5 in
/usr/local/lib/python3.10/dist-packages (from notebook>=4.4.1-
>widgetsnbextension~=3.6.0->ipywidgets>=7.6.5->pycaret[full]) (6.5.4)
Requirement already satisfied: Send2Trash>=1.8.0 in
/usr/local/lib/python3.10/dist-packages (from notebook>=4.4.1-
>widgetsnbextension~=3.6.0->ipywidgets>=7.6.5->pycaret[full]) (1.8.3)
Requirement already satisfied: terminado>=0.8.3 in
/usr/local/lib/python3.10/dist-packages (from notebook>=4.4.1-
>widgetsnbextension~=3.6.0->ipywidgets>=7.6.5->pycaret[full]) (0.18.1)
Requirement already satisfied: prometheus-client in
/usr/local/lib/python3.10/dist-packages (from notebook>=4.4.1-
>widgetsnbextension~=3.6.0->ipywidgets>=7.6.5->pycaret[full]) (0.20.0)
Requirement already satisfied: nbclassic>=0.4.7 in
/usr/local/lib/python3.10/dist-packages (from notebook>=4.4.1-
>widgetsnbextension~=3.6.0->ipywidgets>=7.6.5->pycaret[full]) (1.1.0)
Requirement already satisfied: deprecated>=1.2.6 in
/usr/local/lib/python3.10/dist-packages (from opentelemetry-
api<3,>=1.9.0->mlflow-skinny==2.16.2->mlflow>=2.0.0->pycaret[full])
(1.2.14)
Requirement already satisfied: opentelemetry-semantic-
conventions==0.48b0 in /usr/local/lib/python3.10/dist-packages (from
opentelemetry-sdk<3,>=1.9.0->mlflow-skinny==2.16.2->mlflow>=2.0.0-
>pycaret[full]) (0.48b0)
Requirement already satisfied: faker in
/usr/local/lib/python3.10/dist-packages (from polyfactory>=2.6.3-
>litestar>=2.8.3->evidently~=0.4.16->pycaret[full]) (29.0.0)
Requirement already satisfied: wrapt<2,>=1.10 in

```

```
/usr/local/lib/python3.10/dist-packages (from deprecated>=1.2.6-
>opentelemetry-api<3,>=1.9.0->mlflow-skinny==2.16.2->mlflow>=2.0.0-
>pycaret[full]) (1.16.0)
Requirement already satisfied: smmap<6,>=3.0.1 in
/usr/local/lib/python3.10/dist-packages (from gitdb<5,>=4.0.1-
>gitpython<4,>=3.1.9->mlflow-skinny==2.16.2->mlflow>=2.0.0-
>pycaret[full]) (5.0.1)
Requirement already satisfied: pyasn1-modules>=0.2.1 in
/usr/local/lib/python3.10/dist-packages (from google-auth~=2.0-
>databricks-sdk<1,>=0.20.0->mlflow-skinny==2.16.2->mlflow>=2.0.0-
>pycaret[full]) (0.4.1)
Requirement already satisfied: rsa<5,>=3.1.4 in
/usr/local/lib/python3.10/dist-packages (from google-auth~=2.0-
>databricks-sdk<1,>=0.20.0->mlflow-skinny==2.16.2->mlflow>=2.0.0-
>pycaret[full]) (4.9)
Requirement already satisfied: notebook-shim>=0.2.3 in
/usr/local/lib/python3.10/dist-packages (from nbclassic>=0.4.7-
>notebook>=4.4.1->widgetsnbextension~=3.6.0->ipywidgets>=7.6.5-
>pycaret[full]) (0.2.4)
Requirement already satisfied: bleach in
/usr/local/lib/python3.10/dist-packages (from nbconvert>=5-
>notebook>=4.4.1->widgetsnbextension~=3.6.0->ipywidgets>=7.6.5-
>pycaret[full]) (6.1.0)
Requirement already satisfied: defusedxml in
/usr/local/lib/python3.10/dist-packages (from nbconvert>=5-
>notebook>=4.4.1->widgetsnbextension~=3.6.0->ipywidgets>=7.6.5-
>pycaret[full]) (0.7.1)
Requirement already satisfied: entrypoints>=0.2.2 in
/usr/local/lib/python3.10/dist-packages (from nbconvert>=5-
>notebook>=4.4.1->widgetsnbextension~=3.6.0->ipywidgets>=7.6.5-
>pycaret[full]) (0.4)
Requirement already satisfied: jupyterlab-pygments in
/usr/local/lib/python3.10/dist-packages (from nbconvert>=5-
>notebook>=4.4.1->widgetsnbextension~=3.6.0->ipywidgets>=7.6.5-
>pycaret[full]) (0.3.0)
Requirement already satisfied: mistune<2,>=0.8.1 in
/usr/local/lib/python3.10/dist-packages (from nbconvert>=5-
>notebook>=4.4.1->widgetsnbextension~=3.6.0->ipywidgets>=7.6.5-
>pycaret[full]) (0.8.4)
Requirement already satisfied: nbclient>=0.5.0 in
/usr/local/lib/python3.10/dist-packages (from nbconvert>=5-
>notebook>=4.4.1->widgetsnbextension~=3.6.0->ipywidgets>=7.6.5-
>pycaret[full]) (0.10.0)
Requirement already satisfied: pandocfilters>=1.4.1 in
/usr/local/lib/python3.10/dist-packages (from nbconvert>=5-
>notebook>=4.4.1->widgetsnbextension~=3.6.0->ipywidgets>=7.6.5-
>pycaret[full]) (1.5.1)
Requirement already satisfied: tinycss2 in
/usr/local/lib/python3.10/dist-packages (from nbconvert>=5-
```

```

>notebook>=4.4.1->widgetsnbextension~=3.6.0->ipywidgets>=7.6.5-
>pycaret[full]) (1.3.0)
Requirement already satisfied: argon2-cffi-bindings in
/usr/local/lib/python3.10/dist-packages (from argon2-cffi-
>notebook>=4.4.1->widgetsnbextension~=3.6.0->ipywidgets>=7.6.5-
>pycaret[full]) (21.2.0)
Requirement already satisfied: jupyter-server<3,>=1.8 in
/usr/local/lib/python3.10/dist-packages (from notebook-shim>=0.2.3-
>nbclassic>=0.4.7->notebook>=4.4.1->widgetsnbextension~=3.6.0-
>ipywidgets>=7.6.5->pycaret[full]) (1.24.0)
Requirement already satisfied: pyasn1<0.7.0,>=0.4.6 in
/usr/local/lib/python3.10/dist-packages (from pyasn1-modules>=0.2.1-
>google-auth~=2.0->databricks-sdk<1,>=0.20.0->mlflow-skinny==2.16.2-
>mlflow>=2.0.0->pycaret[full]) (0.6.1)
Requirement already satisfied: webencodings in
/usr/local/lib/python3.10/dist-packages (from bleach->nbconvert>=5-
>notebook>=4.4.1->widgetsnbextension~=3.6.0->ipywidgets>=7.6.5-
>pycaret[full]) (0.5.1)
Requirement already satisfied: websocket-client in
/usr/local/lib/python3.10/dist-packages (from jupyter-server<3,>=1.8-
>notebook-shim>=0.2.3->nbclassic>=0.4.7->notebook>=4.4.1-
>widgetsnbextension~=3.6.0->ipywidgets>=7.6.5->pycaret[full]) (1.8.0)
Using cached pycaret-3.3.2-py3-none-any.whl (486 kB)
Installing collected packages: pycaret
Successfully installed pycaret-3.3.2

```

```

{"id": "c124e2b0efd7492a9e671f9155fb10b2", "pip_warning": {"packages":
["pycaret"]}}

```

```

import pandas as pd
from sklearn.model_selection import train_test_split
from pycaret.classification import *

```

```

data = pd.read_csv('~\WineQT.csv')

```

```

data.head()

```

```

{"summary": "{\n  \"name\": \"data\",\n  \"rows\": 1143,\n  \"fields\":\n  [\n    {\n      \"column\": \"fixed acidity\",\n      \"properties\":\n      {\n        \"dtype\": \"number\",\n        \"std\": 1.74759501716954,\n        \"min\": 4.6,\n        \"max\": 15.9,\n        \"num_unique_values\": 91,\n        \"samples\": [\n          9.7,\n          7.0,\n          9.0\n        ],\n        \"semantic_type\": \"\",\n        \"description\": \"\"\n      },\n      \"column\":\n      \"volatile acidity\",\n      \"properties\": {\n        \"dtype\":\n        \"number\",\n        \"std\": 0.1796331930225245,\n        \"min\":\n        0.12,\n        \"max\": 1.58,\n        \"num_unique_values\": 135,\n        \"samples\": [\n          0.715,\n          0.48,\n          0.92\n        ],\n        \"semantic_type\": \"\",\n        \"description\": \"\"\n      },\n      \"column\": \"citric acid\",

```

```

{"properties": {"dtype": "number", "std": 0.19668585234821898, "min": 0.0, "max": 1.0, "num_unique_values": 77, "samples": [0.02, 0.19, 0.11], "semantic_type": "", "description": ""}, {"column": "residual sugar", "properties": {"dtype": "number", "std": 1.3559174666826799, "min": 0.9, "max": 15.5, "num_unique_values": 80, "samples": [4.0, 1.9, 7.2], "semantic_type": "", "description": ""}, {"column": "chlorides", "properties": {"dtype": "number", "std": 0.04726733795238057, "min": 0.012, "max": 0.611, "num_unique_values": 131, "samples": [0.061, 0.119, 0.066], "semantic_type": "", "description": ""}, {"column": "free sulfur dioxide", "properties": {"dtype": "number", "std": 10.250486123430822, "min": 1.0, "max": 68.0, "num_unique_values": 53, "samples": [30.0, 46.0, 40.0], "semantic_type": "", "description": ""}, {"column": "total sulfur dioxide", "properties": {"dtype": "number", "std": 32.78213030734311, "min": 6.0, "max": 289.0, "num_unique_values": 138, "samples": [70.0, 91.0, 71.0], "semantic_type": "", "description": ""}, {"column": "density", "properties": {"dtype": "number", "std": 0.0019250671302545696, "min": 0.99007, "max": 1.00369, "num_unique_values": 388, "samples": [0.99434, 0.9927, 0.99528], "semantic_type": "", "description": ""}, {"column": "pH", "properties": {"dtype": "number", "std": 0.15666405977275194, "min": 2.74, "max": 4.01, "num_unique_values": 87, "samples": [2.92, 3.51, 3.44], "semantic_type": "", "description": ""}, {"column": "sulphates", "properties": {"dtype": "number", "std": 0.1703987144670741, "min": 0.33, "max": 2.0, "num_unique_values": 89, "samples": [0.72, 1.61, 1.12], "semantic_type": "", "description": ""}, {"column": "alcohol", "properties": {"dtype": "number", "std": 1.0821956098764445, "min": 8.4, "max": 14.9, "num_unique_values": 61, "samples": [9.4, 9.9, 12.7], "semantic_type": ""}]

```



```
[LightGBM] [Info] Total Bins 0
[LightGBM] [Info] Number of data points in the train set: 2, number of
used features: 0
[LightGBM] [Warning] There are no meaningful features which satisfy
the provided configuration. Decreasing Dataset parameters
min_data_in_bin or min_data_in_leaf and re-constructing Dataset might
resolve this warning.
[LightGBM] [Warning] Using sparse features with CUDA is currently not
supported.
[LightGBM] [Info] Number of positive: 1, number of negative: 1
[LightGBM] [Warning] There are no meaningful features which satisfy
the provided configuration. Decreasing Dataset parameters
min_data_in_bin or min_data_in_leaf and re-constructing Dataset might
resolve this warning.
[LightGBM] [Info] Number of positive: 1, number of negative: 1
[LightGBM] [Info] This is the GPU trainer!!
[LightGBM] [Info] Total Bins 0
[LightGBM] [Info] Number of data points in the train set: 2, number of
used features: 0
[LightGBM] [Warning] There are no meaningful features which satisfy
the provided configuration. Decreasing Dataset parameters
min_data_in_bin or min_data_in_leaf and re-constructing Dataset might
resolve this warning.
[LightGBM] [Warning] Using sparse features with CUDA is currently not
supported.
[LightGBM] [Info] Number of positive: 1, number of negative: 1
[LightGBM] [Warning] There are no meaningful features which satisfy
the provided configuration. Decreasing Dataset parameters
min_data_in_bin or min_data_in_leaf and re-constructing Dataset might
resolve this warning.
[LightGBM] [Info] Number of positive: 1, number of negative: 1
[LightGBM] [Info] This is the GPU trainer!!
[LightGBM] [Info] Total Bins 0
```

```
[LightGBM] [Info] Number of data points in the train set: 2, number of
used features: 0
[LightGBM] [Warning] There are no meaningful features which satisfy
the provided configuration. Decreasing Dataset parameters
min_data_in_bin or min_data_in_leaf and re-constructing Dataset might
resolve this warning.
[LightGBM] [Warning] Using sparse features with CUDA is currently not
supported.
[LightGBM] [Info] Number of positive: 1, number of negative: 1
[LightGBM] [Warning] There are no meaningful features which satisfy
the provided configuration. Decreasing Dataset parameters
min_data_in_bin or min_data_in_leaf and re-constructing Dataset might
resolve this warning.
[LightGBM] [Info] Number of positive: 1, number of negative: 1
[LightGBM] [Info] This is the GPU trainer!!
[LightGBM] [Info] Total Bins 0
[LightGBM] [Info] Number of data points in the train set: 2, number of
used features: 0
[LightGBM] [Warning] There are no meaningful features which satisfy
the provided configuration. Decreasing Dataset parameters
min_data_in_bin or min_data_in_leaf and re-constructing Dataset might
resolve this warning.
[LightGBM] [Warning] Using sparse features with CUDA is currently not
supported.
[LightGBM] [Info] Number of positive: 1, number of negative: 1

<pandas.io.formats.style.Styler at 0x7f430cdc3100>

[LightGBM] [Warning] There are no meaningful features which satisfy
the provided configuration. Decreasing Dataset parameters
min_data_in_bin or min_data_in_leaf and re-constructing Dataset might
resolve this warning.
[LightGBM] [Info] Number of positive: 1, number of negative: 1
[LightGBM] [Info] This is the GPU trainer!!
[LightGBM] [Info] Total Bins 0
[LightGBM] [Info] Number of data points in the train set: 2, number of
used features: 0
[LightGBM] [Warning] There are no meaningful features which satisfy
the provided configuration. Decreasing Dataset parameters
min_data_in_bin or min_data_in_leaf and re-constructing Dataset might
resolve this warning.
[LightGBM] [Warning] Using sparse features with CUDA is currently not
supported.
[LightGBM] [Info] Number of positive: 1, number of negative: 1
[LightGBM] [Warning] There are no meaningful features which satisfy
the provided configuration. Decreasing Dataset parameters
min_data_in_bin or min_data_in_leaf and re-constructing Dataset might
resolve this warning.
[LightGBM] [Info] Number of positive: 1, number of negative: 1
[LightGBM] [Info] This is the GPU trainer!!
```

```
[LightGBM] [Info] Total Bins 0
[LightGBM] [Info] Number of data points in the train set: 2, number of
used features: 0
[LightGBM] [Warning] There are no meaningful features which satisfy
the provided configuration. Decreasing Dataset parameters
min_data_in_bin or min_data_in_leaf and re-constructing Dataset might
resolve this warning.
[LightGBM] [Warning] Using sparse features with CUDA is currently not
supported.
[LightGBM] [Info] Number of positive: 1, number of negative: 1
```

```
best_model = compare_models()
```

```
<IPython.core.display.HTML object>
```

```
<pandas.io.formats.style.Styler at 0x7f430d1ba7a0>
```

```
{"model_id": "86df5872398c46c79e5c49ab3dabdefb", "version_major": 2, "version_minor": 0}
```

```
<IPython.core.display.HTML object>
```

```
final_model = finalize_model(best_model)
```

```
# Display the finalized model
print(final_model)
```

```
Pipeline(memory=Memory(location=None),
          steps=[('label_encoding',
                  TransformerWrapperWithInverse(exclude=None,
include=None,
transformer=LabelEncoder()))),
                ('numerical_imputer',
                  TransformerWrapper(exclude=None,
include=['fixed acidity',
'volatile acidity',
'citric acid',
'residual sugar',
'chlorides',
'free sulfur dioxide',
'total sulfur dioxide',
'density',
'pH', 'sulphates...
RandomForestClassifier(bootstrap=True, ccp_alpha=0.0,
class_weight=None,
criterion='gini',
max_depth=None,
max_features='sqrt',
max_leaf_nodes=None,
max_samples=None,
```



```

min_impurity_decrease=0.0,
min_samples_leaf=1,
min_samples_split=2,
min_weight_fraction_leaf=0.0,
monotonic_cst=None,
n_estimators=100,
n_jobs=-1, oob_score=False,
random_state=7393, verbose=0,
warm_start=False))],
verbose=False)

```

```

predictions = predict_model(final_model, data=test_data)

```

Display the first few predictions

```

predictions.head()

```

<pandas.io.formats.style.Styler at 0x7f430c53e7d0>

```

{"summary": "{\n  \"name\": \"predictions\",\n  \"rows\": 229,\n  \"fields\": [\n    {\n      \"column\": \"fixed acidity\",\n      \"properties\": {\n        \"dtype\": \"float32\",\n        \"num_unique_values\": 72,\n        \"samples\": [\n          12.5,\n          9.699999809265137,\n          7.300000190734863\n        ],\n        \"semantic_type\": \"\",\n        \"description\": \"\"\n      },\n      \"column\": \"volatile acidity\",\n      \"properties\": {\n        \"dtype\": \"float32\",\n        \"num_unique_values\": 80,\n        \"samples\": [\n          0.7300000190734863,\n          0.6100000143051147,\n          0.5699999928474426\n        ],\n        \"semantic_type\": \"\",\n        \"description\": \"\"\n      },\n      \"column\": \"citric acid\",\n      \"properties\": {\n        \"dtype\": \"float32\",\n        \"num_unique_values\": 65,\n        \"samples\": [\n          0.3700000047683716,\n          0.5699999928474426,\n          0.03999999910593033\n        ],\n        \"semantic_type\": \"\",\n        \"description\": \"\"\n      },\n      \"column\": \"residual sugar\",\n      \"properties\": {\n        \"dtype\": \"float32\",\n        \"num_unique_values\": 46,\n        \"samples\": [\n          8.300000190734863,\n          3.799999952316284,\n          1.2000000476837158\n        ],\n        \"semantic_type\": \"\",\n        \"description\": \"\"\n      },\n      \"column\": \"chlorides\",\n      \"properties\": {\n        \"dtype\": \"float32\",\n        \"num_unique_values\": 75,\n        \"samples\": [\n          0.10000000149011612,\n          0.05900000035762787,\n          0.06499999761581421\n        ],\n        \"semantic_type\": \"\",\n        \"description\": \"\"\n      },\n      \"column\": \"free sulfur dioxide\",\n      \"properties\": {\n        \"dtype\": \"float32\",\n        \"num_unique_values\": 39,\n        \"samples\": [\n          55.0,\n          43.0,\n          8.0\n        ],\n        \"semantic_type\": \"\",\n        \"description\": \"\"\n      },\n      \"column\": \"total sulfur dioxide\",\n
```

```
\n      \"properties\": {\n        \"dtype\": \"float32\", \n        \"num_unique_values\": 93,\n        \"samples\": [\n          70.0,\n          54.0,\n          104.0\n        ],\n        \"semantic_type\": \"\",\n        \"description\": \"\"\n      },\n      {\n        \"column\": \"density\", \n        \"properties\": {\n          \"dtype\": \"float32\", \n          \"num_unique_values\": 145,\n          \"samples\": [\n            0.9960899949073792,\n            0.9979000091552734,\n            0.9995999932289124\n          ],\n          \"semantic_type\": \"\",\n          \"description\": \"\"\n        },\n        {\n          \"column\": \"pH\", \n          \"properties\": {\n            \"dtype\": \"float32\", \n            \"num_unique_values\": 74,\n            \"samples\": [\n              3.25,\n              3.4100000858306885,\n              3.2100000381469727\n            ],\n            \"semantic_type\": \"\",\n            \"description\": \"\"\n          },\n          {\n            \"column\": \"sulphates\", \n            \"properties\": {\n              \"dtype\": \"float32\", \n              \"num_unique_values\": 58,\n              \"samples\": [\n                0.6000000238418579,\n                0.5899999737739563,\n                0.5199999809265137\n              ],\n              \"semantic_type\": \"\",\n              \"description\": \"\"\n            },\n            {\n              \"column\": \"alcohol\", \n              \"properties\": {\n                \"dtype\": \"float32\", \n                \"num_unique_values\": 48,\n                \"samples\": [\n                  11.300000190734863,\n                  12.699999809265137,\n                  10.699999809265137\n                ],\n                \"semantic_type\": \"\",\n                \"description\": \"\"\n              },\n              {\n                \"column\": \"Id\", \n                \"properties\": {\n                  \"dtype\": \"int32\", \n                  \"num_unique_values\": 229,\n                  \"samples\": [\n                    395,\n                    533,\n                    592\n                  ],\n                  \"semantic_type\": \"\",\n                  \"description\": \"\"\n                },\n                {\n                  \"column\": \"quality\", \n                  \"properties\": {\n                    \"dtype\": \"int8\", \n                    \"num_unique_values\": 5,\n                    \"samples\": [\n                      6,\n                      4,\n                      8\n                    ],\n                    \"semantic_type\": \"\",\n                    \"description\": \"\"\n                  },\n                  {\n                    \"column\": \"prediction_label\", \n                    \"properties\": {\n                      \"dtype\": \"number\", \n                      \"std\": 0,\n                      \"min\": 5,\n                      \"max\": 7,\n                      \"num_unique_values\": 3,\n                      \"samples\": [\n                        5,\n                        6,\n                        7\n                      ],\n                      \"semantic_type\": \"\",\n                      \"description\": \"\"\n                    },\n                    {\n                      \"column\": \"prediction_score\", \n                      \"properties\": {\n                        \"dtype\": \"number\", \n                        \"std\": 0.16163372661580713,\n                        \"min\": 0.31,\n                        \"max\": 0.99,\n                        \"num_unique_values\": 63,\n                        \"samples\": [\n                          0.92,\n                          0.57,\n                          0.53\n                        ],\n                        \"semantic_type\": \"\",\n                        \"description\": \"\"\n                      }\n                    }\n                  }\n                }\n              }\n            }\n          }\n        }\n      }\n    ],\n    \"type\": \"dataframe\", \"variable name\": \"predictions\"}
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