

```
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-

```
>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: 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: aplr>=10.5.1 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]) (10.6.3)  
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-



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core[aplr,dash,debug,linear,notebook,plotly,sensitivity,shap]==0.6.3-
>interpret>=0.2.7->pycaret[full]) (24.2.1)
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: 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-

>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[aplur,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[aplur,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": "720e3ef192494bfb1521bb912e8df0b", "pip_warning": {"packages":
["pycaret"]}}

```

```

import pandas as pd
from pycaret.clustering import *

```

```

data = pd.read_csv('~\Wholesale customers data.csv')

```

```

data.head()

```

```

{"summary": "{\n  \"name\": \"data\",\n  \"rows\": 440,\n  \"fields\": [\n    {\n      \"column\": \"Channel\",\n      \"properties\": {\n        \"dtype\": \"number\",\n        \"std\": 0,\n        \"min\": 1,\n        \"max\": 2,\n        \"num_unique_values\": 2,\n        \"samples\": [\n          1,\n          2\n        ],\n        \"semantic_type\": \"\", \n        \"description\": \"\" \n      },\n      \"column\": \"Region\",\n      \"properties\": {\n        \"dtype\": \"number\",\n        \"std\": 0,\n        \"min\": 1,\n        \"max\": 3,\n        \"num_unique_values\": 3,\n        \"samples\": [\n          3,\n          1\n        ],\n        \"semantic_type\": \"\", \n        \"description\": \"\" \n      },\n      \"column\": \"Fresh\",\n      \"properties\": {\n        \"dtype\": \"number\",\n        \"std\": 12647,\n        \"min\": 3,\n        \"max\": 112151,\n        \"num_unique_values\": 433,\n
```



```
cluster_setup = setup(data, normalize=True,
ignore_features=['Channel', 'Region'], use_gpu=True)
```

```
<pandas.io.formats.style.Styler at 0x78206bd435e0>
```

```
k_means = create_model('kmeans')
```

```
clustered_data = assign_model(k_means)
```

```
clustered_data.head()
```

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

```
<pandas.io.formats.style.Styler at 0x78206c927820>
```

```
{"model_id": "ab73d3786212462abe38a9edf203449a", "version_major": 2, "version_minor": 0}
```

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

```
{"summary": "{\n  \"name\": \"clustered_data\",\n  \"rows\": 440,\n  \"fields\": [\n    {\n      \"column\": \"Fresh\",\n      \"properties\": {\n        \"dtype\": \"int32\",\n        \"num_unique_values\": 433,\n        \"samples\": [\n          21117,\n          20398,\n          112151\n        ],\n        \"semantic_type\": \"\",\n        \"description\": \"\"\n      },\n      \"column\": \"Milk\",\n      \"properties\": {\n        \"dtype\": \"int32\",\n        \"num_unique_values\": 421,\n        \"samples\": [\n          8384,\n          7184,\n          7845\n        ],\n        \"semantic_type\": \"\",\n        \"description\": \"\"\n      },\n      \"column\": \"Grocery\",\n      \"properties\": {\n        \"dtype\": \"int32\",\n        \"num_unique_values\": 430,\n        \"samples\": [\n          5160,\n          3,\n          4945\n        ],\n        \"semantic_type\": \"\",\n        \"description\": \"\"\n      },\n      \"column\": \"Frozen\",\n      \"properties\": {\n        \"dtype\": \"int32\",\n        \"num_unique_values\": 426,\n        \"samples\": [\n          269,\n          7530,\n          1152\n        ],\n        \"semantic_type\": \"\",\n        \"description\": \"\"\n      },\n      \"column\": \"Detergents_Paper\",\n      \"properties\": {\n        \"dtype\": \"int32\",\n        \"num_unique_values\": 417,\n        \"samples\": [\n          1328,\n          302,\n          6740\n        ],\n        \"semantic_type\": \"\",\n        \"description\": \"\"\n      },\n      \"column\": \"Delicassen\",\n      \"properties\": {\n        \"dtype\": \"int32\",\n        \"num_unique_values\": 403,\n        \"samples\": [\n          14472,\n          172,\n          59\n        ],\n        \"semantic_type\": \"\",\n        \"description\": \"\"\n      },\n      \"column\": \"Cluster\",\n      \"properties\": {\n        \"dtype\": \"category\",\n        \"num_unique_values\": 4,\n        \"samples\": [\n          \"Cluster 2\",\n          \"Cluster 3\"\n        ]\n      }\n    ]\n  }\n}
```

```
\ "Cluster 0" \n      ], \n      \ "semantic_type" : \ "\", \n \ "description" : \ "\n      } \n      } \n      ] \n \n", \ "type" : "dataframe", \ "variable_name" : "clustered_data" }
```

```
plot_model(k_means, plot='cluster')
```

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

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