

Install CONDA Java 3.9 - Jupyter notebooks - AZURTEML - and other tools

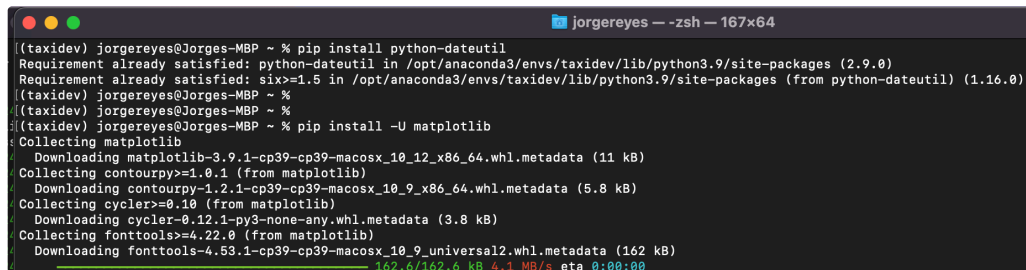
Please install of the packages on the list bellow

Matplotlib

```
1 pip install -U matplotlib
```

First time you use it with the Azure DB you may get the following - Ignore

```
1 Matplotlib is building the font cache; this may take a moment.
```



```
jorgereyes — zsh — 167x64
(jtaxidev) jorgereyes@Jorges-MBP ~ % pip install python-dateutil
Requirement already satisfied: python-dateutil in /opt/anaconda3/envs/taxidev/lib/python3.9/site-packages (2.9.0)
Requirement already satisfied: six>=1.5 in /opt/anaconda3/envs/taxidev/lib/python3.9/site-packages (from python-dateutil) (1.16.0)
(jtaxidev) jorgereyes@Jorges-MBP ~ %
(jtaxidev) jorgereyes@Jorges-MBP ~ %
(jtaxidev) jorgereyes@Jorges-MBP ~ % pip install -U matplotlib
Collecting matplotlib
  Downloading matplotlib-3.9.1-cp39-cp39-macosx_10_12_x86_64.whl.metadata (11 kB)
Collecting contourpy>=1.0.1 (from matplotlib)
  Downloading contourpy-1.2.1-cp39-cp39-macosx_10_9_x86_64.whl.metadata (5.8 kB)
Collecting cycler>=0.10 (from matplotlib)
  Downloading cycler-0.12.1-py3-none-any.whl.metadata (3.8 kB)
Collecting fonttools>=4.22.0 (from matplotlib)
  Downloading fonttools-4.53.1-cp39-cp39-macosx_10_9_universal2.whl.metadata (162 kB)
162.6/162.6 kB 4.1 MB/s eta 0:00:00
```

1. How to install conda java version 3.9

```
1 conda create --name taxidev python=3.9
```

```
jorgereyes - zsh - 181x64
(base) jorgereyes@Jorges-MBP ~ % conda create --name taxidev python=3.9
Channels:
- defaults
Platform: osx-64
Collecting package metadata (repodata.json): done
Solving environment: done

## Package Plan ##

  environment location: /opt/anaconda3/envs/taxidev

added / updated specs:
- python=3.9

The following packages will be downloaded:

package | build | size
-----|-----|-----
pip-24.0 | py39hcd8cb5_0 | 2.6 MB
python-3.9.19 | h5ee71fb_1 | 12.7 MB
setuptools-69.5.1 | py39hcd8cb5_0 | 1004 KB
wheel-0.43.0 | py39hcd8cb5_0 | 107 KB
-----|-----|-----
Total: 16.4 MB

The following NEW packages will be INSTALLED:

ca-certificates pkgs/main/osx-64::ca-certificates-2024.3.11-hcd8cb5_0
libcxx pkgs/main/osx-64::libcxx-14.0.6-h9765a3e_0
libffi pkgs/main/osx-64::libffi-3.4.4-hcd8cb5_1
ncurses pkgs/main/osx-64::ncurses-6.4-hceec6c5f_0
openssl pkgs/main/osx-64::openssl-3.0.14-h46256e1_0
pip pkgs/main/osx-64::pip-24.0-py39hcd8cb5_0
python pkgs/main/osx-64::python-3.9.19-h5ee71fb_1
readline pkgs/main/osx-64::readline-8.2-hca72f7f_0
setuptools pkgs/main/osx-64::setuptools-69.5.1-py39hcd8cb5_0
sqlite pkgs/main/osx-64::sqlite-3.45.3-h6c40b1e_0
tk pkgs/main/osx-64::tk-8.6.14-h4d00af3_0
tzdata pkgs/main/noarch::tzdata-2024a-h04d1e81_0
wheel pkgs/main/osx-64::wheel-0.43.0-py39hcd8cb5_0
xz pkgs/main/osx-64::xz-5.4.6-h6c40b1e_1
zlib pkgs/main/osx-64::zlib-1.2.13-h4b97444_1

Proceed ([y]/n)? y

Downloading and Extracting Packages:

Preparing transaction: done
Verifying transaction: done
Executing transaction: done
#
# To activate this environment, use
#
#     $ conda activate taxidev
#
# To deactivate an active environment, use
#
#     $ conda deactivate
#

(base) jorgereyes@Jorges-MBP ~ %
```

2. How to install Jupyter Notebooks

conda install -c conda-forge notebook

```
conda install -c conda-forge nb_conda_kernels
```

You can also install Jupyter Notebook with pip by running the command `pip install notebook`.

3. Install AZUREML packages

```
conda activate taxidev
```

```
pip install azureml-core
```

```
test the install
```

```
pip show azureml-core
```

```
jorgereyes@Jorges-MBP ~ % pip show azureml-core
Name: azureml-core
Version: 1.56.0
Summary: Azure Machine Learning core packages, modules, and classes
Home-page: https://docs.microsoft.com/python/api/overview/azure/ml/?view=azure-ml-py
Author: Microsoft Corp
Author-email:
License: https://aka.ms/azureml-sdk-license
Location: /opt/anaconda3/envs/taxidev/lib/python3.9/site-packages
Requires: adal, argcomplete, azure-common, azure-core, azure-graphrbac, azure-mgmt-auth,
-mgmt-network, azure-mgmt-resource, azure-mgmt-storage, backports.tempfile, contextlib2,
tensions, msrest, msrestazure, ndg-httpsclient, packaging, paramiko, pathspec, pkginfo,
urllib3
Required-by:
jorgereyes@Jorges-MBP ~ %
```

4. Install main AZUREML package

pip install azureml

```
jorgereyes@Jorges-MBP ~ % pip install azureml
Collecting azureml
  Downloading azureml-0.2.7-py2.py3-none-any.whl.metadata (772 bytes)
Collecting pandas (from azureml)
  Downloading pandas-2.2.2-cp39-cp39-macosx_10_9_x86_64.whl.metadata (19 kB)
Requirement already satisfied: python-dateutil in /opt/anaconda3/envs/taxidev/lib/python3.9/site-packa
Requirement already satisfied: requests in /opt/anaconda3/envs/taxidev/lib/python3.9/site-packages (fr
Collecting numpy>=1.22.4 (from pandas->azureml)
  Downloading numpy-2.0.0-cp39-cp39-macosx_10_9_x86_64.whl.metadata (60 kB)
Requirement already satisfied: pytz>=2020.1 in /opt/anaconda3/envs/taxidev/lib/python3.9/site-packages
Collecting tzdata>=2022.7 (from pandas->azureml)
  Downloading tzdata-2024.1-py2.py3-none-any.whl.metadata (1.4 kB)
Requirement already satisfied: six>=1.5 in /opt/anaconda3/envs/taxidev/lib/python3.9/site-packages (fr
Requirement already satisfied: charset-normalizer<4,>=2 in /opt/anaconda3/envs/taxidev/lib/python3.9/s
Requirement already satisfied: idna<4,>=2.5 in /opt/anaconda3/envs/taxidev/lib/python3.9/site-packages
Requirement already satisfied: urllib3<3,>=1.21.1 in /opt/anaconda3/envs/taxidev/lib/python3.9/site-pa
Requirement already satisfied: certifi>=2017.4.17 in /opt/anaconda3/envs/taxidev/lib/python3.9/site-pa
Downloading azureml-0.2.7-py2.py3-none-any.whl (23 kB)
Downloading pandas-2.2.2-cp39-cp39-macosx_10_9_x86_64.whl (12.6 MB)
12.6/12.6 MB 49.1 MB/s eta 0:00:00
Downloading numpy-2.0.0-cp39-cp39-macosx_10_9_x86_64.whl (21.2 MB)
21.2/21.2 MB 58.5 MB/s eta 0:00:00
Downloading tzdata-2024.1-py2.py3-none-any.whl (345 kB)
345.4/345.4 kB 28.9 MB/s eta 0:00:00
Installing collected packages: tzdata, numpy, pandas, azureml
Successfully installed azureml-0.2.7 numpy-2.0.0 pandas-2.2.2 tzdata-2024.1
jorgereyes@Jorges-MBP ~ %
```

5. Install Connection to DB packages

pip install azureml-opendatasets

```
jorgereyes@Jorges-MBP ~ % pip install azureml-opendatasets
Collecting azureml-opendatasets
  Downloading azureml-opendatasets-1.56.0-py3-none-any.whl.metadata (2.4 kB)
Collecting azureml-telemetry-1.56.0 (from azureml-opendatasets)
  Downloading azureml-telemetry-1.56.0-py3-none-any.whl.metadata (1.1 kB)
Requirement already satisfied: azureml-core==1.56.0 in /opt/anaconda3/envs/taxidev/lib/python3.9/site-packages (from azureml-opendatasets) (1.56.0)
Collecting azureml-dataset-runtime-1.56.0 (from azureml-dataset-runtime[fuse,pandas]==1.56.0->azureml-opendatasets)
  Downloading azureml-dataset-runtime-1.56.0-py3-none-any.whl.metadata (1.2 kB)
Requirement already satisfied: numpy<2.0.0,>=1.16.0 in /opt/anaconda3/envs/taxidev/lib/python3.9/site-packages (from azureml-opendatasets) (2.0.0)
Collecting pandas<2.0.0,>=0.21.0 (from azureml-opendatasets)
  Downloading pandas-2.0.0-cp39-cp39-macosx_10_9_x86_64.whl.metadata (18 kB)
Collecting scipy<2.0.0,>=1.0.0 (from azureml-opendatasets)
  Downloading scipy-1.13.1-cp39-cp39-macosx_10_9_x86_64.whl.metadata (60 kB)
60.6/60.6 kB 2.6 MB/s eta 0:00:00
Collecting pyarrow=8.16.0 (from azureml-opendatasets)
  Downloading pyarrow-16.1.0-cp39-cp39-macosx_10_15_x86_64.whl.metadata (3.0 kB)
Collecting pyspark (from azureml-opendatasets)
  Downloading pyspark-3.5.1.tar.gz (317.0 MB)
317.0/317.0 MB 14.6 MB/s eta 0:00:00
```

```

Downloading cloudpickle-2.2.1-py3-none-any.whl (25 kB)
Building wheels for collected packages: pyspark, fusepy
  Building wheel for pyspark (setup.py) ... done
  Created wheel for pyspark: filename=pyspark-3.5.1-py2.py3-none-any.whl size=317488491 sha256=...
  Stored in directory: /Users/jorgereyes/Library/Caches/pip/wheels/92/09/11/aa01d01a7f005...
  Building wheel for fusepy (setup.py) ... done
  Created wheel for fusepy: filename=fusepy-3.0.1-py3-none-any.whl size=10487 sha256=54fd...
  Stored in directory: /Users/jorgereyes/Library/Caches/pip/wheels/d5/60/5d/807081f971b06...
Successfully built pyspark fusepy
Installing collected packages: py4j, fusepy, azureml-dataprep-rslex, azureml-dataprep-native, azure-identity, azureml-telemetry, azureml-dataprep, azureml-dataset-runtime, azureml-opendatasets
  Attempting uninstall: numpy
    Found existing installation: numpy 2.0.0
    Uninstalling numpy-2.0.0:
      Successfully uninstalled numpy-2.0.0
  Attempting uninstall: pandas
    Found existing installation: pandas 2.2.2
    Uninstalling pandas-2.2.2:
      Successfully uninstalled pandas-2.2.2
Successfully installed applicationinsights-0.11.10 azure-identity-1.17.1 azureml-dataprep-native-1.16.0 azureml-dataset-runtime-1.56.0 azureml-opendatasets-1.56.0 azureml-telemetry-1.56.0 cloudpickle-2.2.1 py4j-0.7.90 pyspark-3.5.1 scipy-1.13.1
(taxidev) jorgereyes@Jorges-MBP ~ %

```

6. Test connection JUPYTER NOTEBOOK

Code:

```

1 # This is a package in preview.
2 from azureml.opendatasets import NycTlcGreen
3
4 from datetime import datetime
5 from dateutil import parser
6
7
8 end_date = parser.parse('2018-06-06')
9 start_date = parser.parse('2018-05-01')
10 nyc_tlc = NycTlcGreen(start_date=start_date, end_date=end_date)
11 nyc_tlc_df = nyc_tlc.to_pandas_dataframe()
12
13 nyc_tlc_df.info()

```

Output - took 53 seconds to render

```

1 {'infer_column_types': 'False', 'activity': 'download'}
2 {'infer_column_types': 'False', 'activity': 'download', 'activityApp': 'FileDataset'}
3 [Info] read from /var/folders/m1/v2p5dlc135x8ctp72qfss620000gn/T/tmpya6ligfw/https%3A%2Fazureopendatastorage.a
4 [Info] read from /var/folders/m1/v2p5dlc135x8ctp72qfss620000gn/T/tmpya6ligfw/https%3A%2Fazureopendatastorage.a
5 <class 'pandas.core.frame.DataFrame'>
6 Int64Index: 923257 entries, 0 to 598725
7 Data columns (total 23 columns):
8  #   Column                Non-Null Count  Dtype
9  ---  ---
10 0   vendorID                923257 non-null  int32
11 1   lpepPickupDatetime      923257 non-null  datetime64[ns]
12 2   lpepDropoffDatetime     923257 non-null  datetime64[ns]
13 3   passengerCount          923257 non-null  int32
14 4   tripDistance            923257 non-null  float64
15 5   puLocationId            923257 non-null  object
16 6   doLocationId            923257 non-null  object
17 7   pickupLongitude         0 non-null      float64
18 8   pickupLatitude          0 non-null      float64
19 9   dropoffLongitude        0 non-null      float64
20 10  dropoffLatitude         0 non-null      float64
21 11  rateCodeID              923257 non-null  int32
22 12  storeAndFwdFlag         923257 non-null  object
23 13  paymentType             923257 non-null  int32

```

```

24 14 fareAmount      923257 non-null float64
25 15 extra           923257 non-null float64
26 16 mtaTax          923257 non-null float64
27 17 improvementSurcharge 923257 non-null object
28 18 tipAmount       923257 non-null float64
29 19 tollsAmount     923257 non-null float64
30 20 ehailFee        0 non-null float64
31 21 totalAmount     923257 non-null float64
32 22 tripType        923257 non-null int32
33 dtypes: datetime64[ns](2), float64(12), int32(5), object(4)
34 memory usage: 151.4+ MB
35

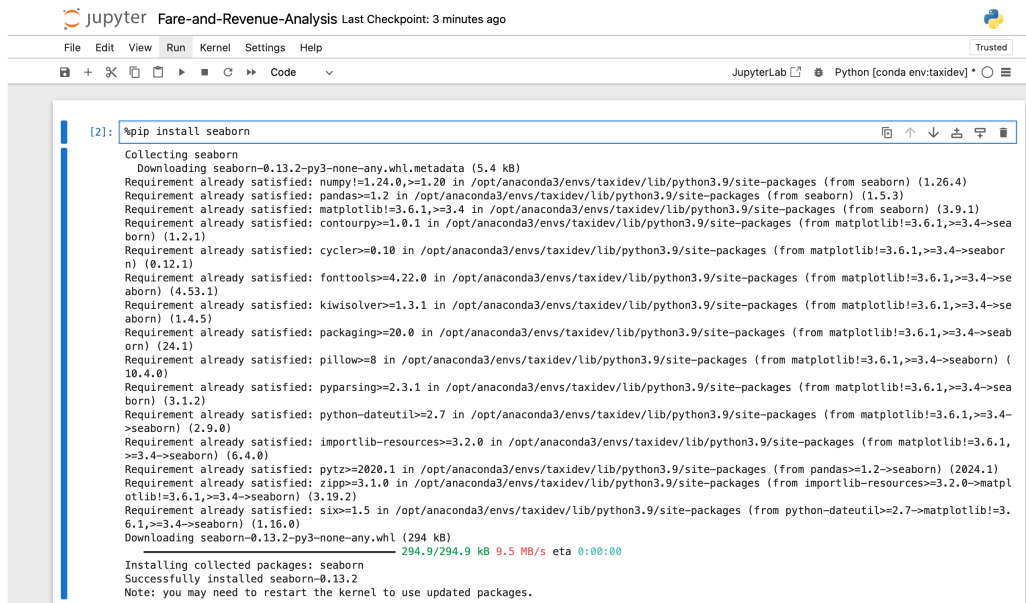
```

Install Seaborn

```
pip install seaborn
```

you can do that from inside a jupyter notebook

If you do install it from inside a Jupyter notebook - remember to restart the Kernel



```

Jupyter Fare-and-Revenue-Analysis Last Checkpoint: 3 minutes ago
File Edit View Run Kernel Settings Help Trusted
JupyterLab Python [conda env:taxidev]

[2]: %pip install seaborn

Collecting seaborn
  Downloading seaborn-0.13.2-py3-none-any.whl.metadata (5.4 kB)
Requirement already satisfied: numpy!=1.24.0,>=1.20 in /opt/anaconda3/envs/taxidev/lib/python3.9/site-packages (from seaborn) (1.26.4)
Requirement already satisfied: pandas>=1.2 in /opt/anaconda3/envs/taxidev/lib/python3.9/site-packages (from seaborn) (1.5.3)
Requirement already satisfied: matplotlib!=3.6.1,>=3.4 in /opt/anaconda3/envs/taxidev/lib/python3.9/site-packages (from seaborn) (3.9.1)
Requirement already satisfied: contourpy>=1.0.1 in /opt/anaconda3/envs/taxidev/lib/python3.9/site-packages (from matplotlib!=3.6.1,>=3.4->seaborn) (1.2.1)
Requirement already satisfied: cycler>=0.10 in /opt/anaconda3/envs/taxidev/lib/python3.9/site-packages (from matplotlib!=3.6.1,>=3.4->seaborn) (0.12.1)
Requirement already satisfied: fonttools>=4.22.0 in /opt/anaconda3/envs/taxidev/lib/python3.9/site-packages (from matplotlib!=3.6.1,>=3.4->seaborn) (4.53.1)
Requirement already satisfied: kiwisolver>=1.3.1 in /opt/anaconda3/envs/taxidev/lib/python3.9/site-packages (from matplotlib!=3.6.1,>=3.4->seaborn) (1.4.5)
Requirement already satisfied: packaging>=20.0 in /opt/anaconda3/envs/taxidev/lib/python3.9/site-packages (from matplotlib!=3.6.1,>=3.4->seaborn) (24.1)
Requirement already satisfied: pillow>=8 in /opt/anaconda3/envs/taxidev/lib/python3.9/site-packages (from matplotlib!=3.6.1,>=3.4->seaborn) (10.4.0)
Requirement already satisfied: pyparsing>=2.3.1 in /opt/anaconda3/envs/taxidev/lib/python3.9/site-packages (from matplotlib!=3.6.1,>=3.4->seaborn) (3.1.2)
Requirement already satisfied: python-dateutil>=2.7 in /opt/anaconda3/envs/taxidev/lib/python3.9/site-packages (from matplotlib!=3.6.1,>=3.4->seaborn) (2.9.0)
Requirement already satisfied: importlib-resources>=3.2.0 in /opt/anaconda3/envs/taxidev/lib/python3.9/site-packages (from matplotlib!=3.6.1,>=3.4->seaborn) (6.4.0)
Requirement already satisfied: pytz>=2020.1 in /opt/anaconda3/envs/taxidev/lib/python3.9/site-packages (from pandas>=1.2->seaborn) (2024.1)
Requirement already satisfied: zipp>=3.1.0 in /opt/anaconda3/envs/taxidev/lib/python3.9/site-packages (from importlib-resources>=3.2.0->matplotlib!=3.6.1,>=3.4->seaborn) (3.19.2)
Requirement already satisfied: six>=1.5 in /opt/anaconda3/envs/taxidev/lib/python3.9/site-packages (from python-dateutil>=2.7->matplotlib!=3.6.1,>=3.4->seaborn) (1.16.0)
  Downloading seaborn-0.13.2-py3-none-any.whl (294 kB)
    294.9/294.9 kB 9.5 MB/s eta 0:00:00
Installing collected packages: seaborn
Successfully installed seaborn-0.13.2
Note: you may need to restart the kernel to use updated packages.

```