

ML Runtimes Pre-installed Packages

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Pre-Installed Packages in ML Runtimes

Cloudera Machine Learning ships with several base engine images that include Python kernels, and frequently used libraries.



Note: New ML Runtime releases are automatically added to the deployment, if internet connection is available.

Because the software and versions in these lists is installed in the images, you should not upgrade these versions because this will cause dependency conflicts. If any software in this list needs to be at a higher version, you should use a more recent version of the legacy engine or ML Runtime.

ML Runtimes 2022.04

This section lists the Python, R, and Scala libraries that ship with ML Runtimes 2022.04.



Note: Nvidia GPU Edition comes with CUDA 11.4.1 preinstalled.

Python 3.9 Libraries for Workbench

This section lists the packages in Python 3.9 Workbench Runtimes that ship with ML Runtimes 2022.04.

Table 1: Packages in Python 3.9.11 Workbench Runtimes - Standard

Library	Version
python	3.9.6
pip	21.1.3
argcomplete	2.0.0
backcall	0.2.0
bitarray	2.1.0
certifi	2021.5.30
charset-normalizer	2.0.6
cycler	0.10.0
debugpy	1.6.0
decorator	4.4.2
entrypoints	0.4
idna	3.2
importlib-metadata	4.11.3
impyla	0.17.0
ipykernel	6.5.0
ipython	7.31.1
jedi	0.17.2
jupyter-client	7.2.2
jupyter-core	4.9.2

Library	Version
kerberos	1.3.1
kiwisolver	1.3.1
matplotlib	3.3.4
matplotlib-inline	0.1.3
nest-asyncio	1.5.5
numpy	1.19.4
parso	0.7.1
pexpect	4.8.0
pickleshare	0.7.5
Pillow	9.0.1
prompt-toolkit	3.0.8
ptyprocess	0.6.0
pure-sasl	0.6.2
py4j	0.10.9.1
Pygments	2.8.1
pyparsing	2.4.7
python-dateutil	2.8.2
pyzmq	22.3.0
requests	2.26.0
six	1.15.0
thrift	0.11.0
thrift-sasl	0.4.3
tornado	6.1
traitlets	5.1.1
typing-extensions	4.1.1
urllib3	1.26.6
wcwidth	0.2.5
zipp	3.8.0

Table 2: Packages in Python 3.9.11 Workbench Runtimes - Nvidia GPU Edition

Library	Version
python	3.9.6
pip	21.1.3
cuda	11.4.1-1
libcudnn8	8.2.2.26-1
argcomplete	2.0.0
backcall	0.2.0
bitarray	2.1.0
certifi	2021.5.30

Library	Version
charset-normalizer	2.0.6
cycler	0.10.0
debugpy	1.6.0
decorator	4.4.2
entrypoints	0.4
idna	3.2
importlib-metadata	4.11.3
impyla	0.17.0
ipykernel	6.5.0
ipython	7.31.1
jedi	0.17.2
jupyter-client	7.2.2
jupyter-core	4.9.2
kerberos	1.3.1
kiwisolver	1.3.1
matplotlib	3.3.4
matplotlib-inline	0.1.3
nest-asyncio	1.5.5
numpy	1.19.4
parso	0.7.1
pexpect	4.8.0
pickleshare	0.7.5
Pillow	9.0.1
prompt-toolkit	3.0.8
ptyprocess	0.6.0
pure-sasl	0.6.2
py4j	0.10.9.1
Pygments	2.8.1
pyparsing	2.4.7
python-dateutil	2.8.2
pyzmq	22.3.0
requests	2.26.0
six	1.15.0
thrift	0.11.0
thrift-sasl	0.4.3
tornado	6.1
traitlets	5.1.1
typing-extensions	4.1.1
urllib3	1.26.6

Library	Version
wcwidth	0.2.5
zipp	3.8.0

Python 3.8 Libraries for Workbench

This section lists the packages in Python 3.8 Workbench Runtimes that ship with ML Runtimes 2022.04.

Table 3: Packages in Python 3.8.13 Workbench Runtimes - Standard

Library	Version
python	3.8.6
pip	21.1.3
argcomplete	2.0.0
backcall	0.2.0
bitarray	2.1.0
certifi	2021.5.30
charset-normalizer	2.0.6
cycler	0.10.0
debugpy	1.6.0
decorator	4.4.2
entrypoints	0.4
idna	3.2
importlib-metadata	4.11.3
impyla	0.17.0
ipykernel	6.5.0
ipython	7.31.1
jedi	0.17.2
jupyter-client	7.2.2
jupyter-core	4.9.2
kerberos	1.3.1
kiwisolver	1.3.1
matplotlib	3.3.4
matplotlib-inline	0.1.3
nest-asyncio	1.5.5
numpy	1.19.4
parso	0.7.1
pexpect	4.8.0
pickleshare	0.7.5
Pillow	9.0.1
prompt-toolkit	3.0.8
ptyprocess	0.6.0

Library	Version
pure-sasl	0.6.2
py4j	0.10.9.1
Pygments	2.8.1
pyparsing	2.4.7
python-dateutil	2.8.2
pyzmq	22.3.0
requests	2.26.0
six	1.15.0
thrift	0.11.0
thrift-sasl	0.4.3
tornado	6.1
traitlets	5.1.1
typing-extensions	4.1.1
urllib3	1.26.6
wcwidth	0.2.5
zipp	3.8.0

Table 4: Packages in Python 3.8.13 Workbench Runtimes - Nvidia GPU Edition

Library	Version
python	3.8.6
pip	21.1.3
cuda	11.4.1-1
libcudnn8	8.2.2.26-1
argcomplete	2.0.0
backcall	0.2.0
bitarray	2.1.0
certifi	2021.5.30
charset-normalizer	2.0.6
cycler	0.10.0
debugpy	1.6.0
decorator	4.4.2
entrypoints	0.4
idna	3.2
importlib-metadata	4.11.3
impyla	0.17.0
ipykernel	6.5.0
ipython	7.31.1
jedi	0.17.2
jupyter-client	7.2.2

Library	Version
jupyter-core	4.9.2
kerberos	1.3.1
kiwisolver	1.3.1
matplotlib	3.3.4
matplotlib-inline	0.1.3
nest-asyncio	1.5.5
numpy	1.19.4
parso	0.7.1
pexpect	4.8.0
pickleshare	0.7.5
Pillow	9.0.1
prompt-toolkit	3.0.8
ptyprocess	0.6.0
pure-sasl	0.6.2
py4j	0.10.9.1
Pygments	2.8.1
pyparsing	2.4.7
python-dateutil	2.8.2
pyzmq	22.3.0
requests	2.26.0
six	1.15.0
thrift	0.11.0
thrift-sasl	0.4.3
tornado	6.1
traitlets	5.1.1
typing-extensions	4.1.1
urllib3	1.26.6
wcwidth	0.2.5
zipp	3.8.0

Python 3.7 Libraries for Workbench

This section lists the packages in Python 3.7 Workbench Runtimes that ship with ML Runtimes 2022.04.

Table 5: Packages in Python 3.7.13 Workbench Runtimes - Standard

Library	Version
python	3.7.11
pip	21.1.3
argcomplete	2.0.0
backcall	0.2.0

Library	Version
bitarray	2.1.0
certifi	2021.5.30
charset-normalizer	2.0.6
cycler	0.10.0
debugpy	1.6.0
decorator	4.4.2
entrypoints	0.4
idna	3.2
importlib-metadata	4.11.3
impyla	0.17.0
ipykernel	6.5.0
ipython	7.31.1
jedi	0.17.2
jupyter-client	7.2.2
jupyter-core	4.9.2
kerberos	1.3.1
kiwisolver	1.3.1
matplotlib	3.3.4
matplotlib-inline	0.1.3
nest-asyncio	1.5.5
numpy	1.19.4
parso	0.7.1
pexpect	4.8.0
pickleshare	0.7.5
Pillow	9.0.1
prompt-toolkit	3.0.8
ptyprocess	0.6.0
pure-sasl	0.6.2
py4j	0.10.9.1
Pygments	2.8.1
pyparsing	2.4.7
python-dateutil	2.8.2
pyzmq	22.3.0
requests	2.26.0
six	1.15.0
thrift	0.11.0
thrift-sasl	0.4.3
tornado	6.1
traitlets	5.1.1

Library	Version
typing-extensions	4.1.1
urllib3	1.26.6
wcwidth	0.2.5
zipp	3.8.0

Table 6: Packages in Python 3.7.13 Workbench Runtimes - Nvidia GPU Edition

Library	Version
python	3.7.11
pip	21.1.3
cuda	11.4.1-1
libcudnn8	8.2.2.26-1
argcomplete	2.0.0
backcall	0.2.0
bitarray	2.1.0
certifi	2021.5.30
charset-normalizer	2.0.6
cycler	0.10.0
debugpy	1.6.0
decorator	4.4.2
entrypoints	0.4
idna	3.2
importlib-metadata	4.11.3
impyla	0.17.0
ipykernel	6.5.0
ipython	7.31.1
jedi	0.17.2
jupyter-client	7.2.2
jupyter-core	4.9.2
kerberos	1.3.1
kiwisolver	1.3.1
matplotlib	3.3.4
matplotlib-inline	0.1.3
nest-asyncio	1.5.5
numpy	1.19.4
parso	0.7.1
pexpect	4.8.0
pickleshare	0.7.5
Pillow	9.0.1
prompt-toolkit	3.0.8

Library	Version
ptyprocess	0.6.0
pure-sasl	0.6.2
py4j	0.10.9.1
Pygments	2.8.1
pyparsing	2.4.7
python-dateutil	2.8.2
pyzmq	22.3.0
requests	2.26.0
six	1.15.0
thrift	0.11.0
thrift-sasl	0.4.3
tornado	6.1
traitlets	5.1.1
typing-extensions	4.1.1
urllib3	1.26.6
wcwidth	0.2.5
zipp	3.8.0

Table 7: Packages in Python 3.7.13 PBJ Workbench - Standard

Library	Version
python	3.7.11
pip	21.1.3
cuda	11.4.1-1
libcudnn8	8.2.2.26-1
anyio	3.3.0
argcomplete	2.0.0
argon2-cffi	20.1.0
async-generator	1.10
attrs	20.3.0
Babel	2.9.1
backcall	0.2.0
beautifulsoup4	4.11.1
bitarray	2.1.0
bleach	3.3.1
certifi	2020.11.8
cffi	1.14.4
chardet	4.0.0
charset-normalizer	2.0.6
cycler	0.10.0

Library	Version
debugpy	1.6.0
decorator	4.4.2
defusedxml	0.6.0
entrypoints	0.4
fastjsonschema	2.15.3
idna	2.10
importlib-metadata	4.11.3
impyla	0.17.0
ipykernel	6.5.0
ipython	7.31.1
ipython-genutils	0.2.0
jedi	0.17.2
Jinja2	3.1.1
json5	0.9.5
jsonschema	3.2.0
jupyter-client	7.2.2
jupyter-core	4.9.2
jupyter-server	1.16.0
jupyterlab	3.2.8
jupyterlab-pygments	0.1.2
jupyterlab-server	2.7.2
kerberos	1.3.1
kiwisolver	1.3.1
MarkupSafe	2.1.1
matplotlib	3.3.4
matplotlib-inline	0.1.3
mistune	0.8.4
nbclassic	0.3.1
nbclient	0.5.1
nbconvert	6.5.0
nbformat	5.3.0
nest-asyncio	1.5.5
notebook	6.4.3
numpy	1.19.4
packaging	20.9
pandocfilters	1.4.3
parso	0.7.1
pexpect	4.8.0
pickleshare	0.7.5

Library	Version
Pillow	9.0.1
prometheus-client	0.9.0
prompt-toolkit	3.0.8
ptyprocess	0.6.0
pure-sasl	0.6.2
py4j	0.10.9.1
pycparser	2.20
Pygments	2.8.1
pyparsing	2.4.7
pyrsistent	0.17.3
python-dateutil	2.8.2
pytz	2021.1
pyzmq	22.3.0
requests	2.25.1
Send2Trash	1.5.0
six	1.15.0
sniffio	1.2.0
soupsieve	2.3.2
terminado	0.9.2
thrift	0.11.0
thrift-sasl	0.4.3
tinycss2	1.1.1
tornado	6.1
traitlets	5.1.1
typing-extensions	4.1.1
urllib3	1.26.6
wcwidth	0.2.5
webencodings	0.5.1
websocket-client	1.2.1
zipp	3.8.0

Scala 2.11 Libraries for Workbench

This section lists the packages in Scala 2.11.12 Workbench Runtimes that ship with ML Runtimes 2022.04.

Scala 2.11.12 Libraries for Workbench - Standard

Library	Version
org.scala-lang:scala-library	2.11.12
org.scalatest:scalatest	2.2.4
org.scala-lang:scala-reflect	2.11.12
org.scala-lang:scala-compiler	2.11.12

Library	Version
io.circe:circe-generic	0.11.2
io.circe:circe-parser	0.11.2
org.scalameta:scalameta	1.0.0

Python 3.9.6 Libraries for JupyterLab

This section lists the packages in Python 3.9 JupyterLab Runtimes that ship with ML Runtimes 2022.04.

Table 8: Packages in Python 3.9.11 JupyterLab Runtimes - Standard

Library	Version
python	3.9.6
pip	21.1.3
anyio	3.3.0
argcomplete	2.0.0
argon2-cffi	20.1.0
async-generator	1.10
attrs	20.3.0
Babel	2.9.1
backcall	0.2.0
beautifulsoup4	4.11.1
bitarray	2.1.0
bleach	3.3.1
certifi	2020.11.8
cffi	1.14.4
chardet	4.0.0
charset-normalizer	2.0.6
cycler	0.10.0
debugpy	1.6.0
decorator	4.4.2
defusedxml	0.6.0
entrypoints	0.4
fastjsonschema	2.15.3
idna	2.10
importlib-metadata	4.11.3
impyla	0.17.0
ipykernel	6.5.0
ipython	7.31.1
ipython-genutils	0.2.0
jedi	0.17.2
Jinja2	3.1.1

Library	Version
json5	0.9.5
jsonschema	3.2.0
jupyter-client	7.2.2
jupyter-core	4.9.2
jupyter-server	1.16.0
jupyterlab	3.2.8
jupyterlab-pygments	0.1.2
jupyterlab-server	2.7.2
kerberos	1.3.1
kiwisolver	1.3.1
MarkupSafe	2.1.1
matplotlib	3.3.4
matplotlib-inline	0.1.3
mistune	0.8.4
nbclassic	0.3.1
nbclient	0.5.1
nbconvert	6.5.0
nbformat	5.3.0
nest-asyncio	1.5.5
notebook	6.4.3
numpy	1.19.4
packaging	20.9
pandocfilters	1.4.3
parso	0.7.1
pexpect	4.8.0
pickleshare	0.7.5
Pillow	9.0.1
prometheus-client	0.9.0
prompt-toolkit	3.0.8
ptyprocess	0.6.0
pure-sasl	0.6.2
py4j	0.10.9.1
pycparser	2.20
Pygments	2.8.1
pyparsing	2.4.7
pyrsistent	0.17.3
python-dateutil	2.8.2
pytz	2021.1
pyzmq	22.3.0

Library	Version
requests	2.25.1
Send2Trash	1.5.0
six	1.15.0
sniffio	1.2.0
soupsieve	2.3.2
terminado	0.9.2
thrift	0.11.0
thrift-sasl	0.4.3
tinycss2	1.1.1
tornado	6.1
traitlets	5.1.1
typing-extensions	4.1.1
urllib3	1.26.6
wcwidth	0.2.5
webencodings	0.5.1
websocket-client	1.2.1
zipp	3.8.0

Table 9: Packages in Python 3.9.11 JupyterLab Runtimes - Nvidia GPU Edition

Library	Version
python	3.9.6
pip	21.1.3
cuda	11.4.1-1
libcudnn8	8.2.2.26-1
anyio	3.3.0
argcomplete	2.0.0
argon2-cffi	20.1.0
async-generator	1.10
attrs	20.3.0
Babel	2.9.1
backcall	0.2.0
beautifulsoup4	4.11.1
bitarray	2.1.0
bleach	3.3.1
certifi	2020.11.8
cffi	1.14.4
chardet	4.0.0
charset-normalizer	2.0.6
cycler	0.10.0

Library	Version
debugpy	1.6.0
decorator	4.4.2
defusedxml	0.6.0
entrypoints	0.4
fastjsonschema	2.15.3
idna	2.10
importlib-metadata	4.11.3
impyla	0.17.0
ipykernel	6.5.0
ipython	7.31.1
ipython-genutils	0.2.0
jedi	0.17.2
Jinja2	3.1.1
json5	0.9.5
jsonschema	3.2.0
jupyter-client	7.2.2
jupyter-core	4.9.2
jupyter-server	1.16.0
jupyterlab	3.2.8
jupyterlab-pygments	0.1.2
jupyterlab-server	2.7.2
kerberos	1.3.1
kiwisolver	1.3.1
MarkupSafe	2.1.1
matplotlib	3.3.4
matplotlib-inline	0.1.3
mistune	0.8.4
nbclassic	0.3.1
nbclient	0.5.1
nbconvert	6.5.0
nbformat	5.3.0
nest-asyncio	1.5.5
notebook	6.4.3
numpy	1.19.4
packaging	20.9
pandocfilters	1.4.3
parso	0.7.1
pexpect	4.8.0
pickleshare	0.7.5

Library	Version
Pillow	9.0.1
prometheus-client	0.9.0
prompt-toolkit	3.0.8
ptyprocess	0.6.0
pure-sasl	0.6.2
py4j	0.10.9.1
pycparser	2.20
Pygments	2.8.1
pyparsing	2.4.7
pyrsistent	0.17.3
python-dateutil	2.8.2
pytz	2021.1
pyzmq	22.3.0
requests	2.25.1
Send2Trash	1.5.0
six	1.15.0
sniffio	1.2.0
soupsieve	2.3.2
terminado	0.9.2
thrift	0.11.0
thrift-sasl	0.4.3
tinycss2	1.1.1
tornado	6.1
traitlets	5.1.1
typing-extensions	4.1.1
urllib3	1.26.6
wcwidth	0.2.5
webencodings	0.5.1
websocket-client	1.2.1
zipp	3.8.0

Python 3.8 Libraries for JupyterLab

This section lists the packages in Python 3.8 JupyterLab Runtimes that ship with ML Runtimes 2022.04.

Table 10: Packages in Python 3.8.13 JupyterLab Runtimes - Standard

Library	Version
python	3.8.6
pip	21.1.3
anyio	3.3.0

Library	Version
argcomplete	2.0.0
argon2-cffi	20.1.0
async-generator	1.10
attrs	20.3.0
Babel	2.9.1
backcall	0.2.0
beautifulsoup4	4.11.1
bitarray	2.1.0
bleach	3.3.1
certifi	2020.11.8
cffi	1.14.4
chardet	4.0.0
charset-normalizer	2.0.6
cycler	0.10.0
debugpy	1.6.0
decorator	4.4.2
defusedxml	0.6.0
entrypoints	0.4
fastjsonschema	2.15.3
idna	2.10
importlib-metadata	4.11.3
impyla	0.17.0
ipykernel	6.5.0
ipython	7.31.1
ipython-genutils	0.2.0
jedi	0.17.2
Jinja2	3.1.1
json5	0.9.5
jsonschema	3.2.0
jupyter-client	7.2.2
jupyter-core	4.9.2
jupyter-server	1.16.0
jupyterlab	3.2.8
jupyterlab-pygments	0.1.2
jupyterlab-server	2.7.2
kerberos	1.3.1
kiwisolver	1.3.1
MarkupSafe	2.1.1
matplotlib	3.3.4

Library	Version
matplotlib-inline	0.1.3
mistune	0.8.4
nbclassic	0.3.1
nbclient	0.5.1
nbconvert	6.5.0
nbformat	5.3.0
nest-asyncio	1.5.5
notebook	6.4.3
numpy	1.19.4
packaging	20.9
pandocfilters	1.4.3
parso	0.7.1
pexpect	4.8.0
pickleshare	0.7.5
Pillow	9.0.1
prometheus-client	0.9.0
prompt-toolkit	3.0.8
ptyprocess	0.6.0
pure-sasl	0.6.2
py4j	0.10.9.1
pycparser	2.20
Pygments	2.8.1
pyparsing	2.4.7
pyrsistent	0.17.3
python-dateutil	2.8.2
pytz	2021.1
pyzmq	22.3.0
requests	2.25.1
Send2Trash	1.5.0
six	1.15.0
sniffio	1.2.0
soupsieve	2.3.2
terminado	0.9.2
thrift	0.11.0
thrift-sasl	0.4.3
tinycss2	1.1.1
tornado	6.1
traitlets	5.1.1
typing-extensions	4.1.1

Library	Version
urllib3	1.26.6
wcwidth	0.2.5
webencodings	0.5.1
websocket-client	1.2.1
zipp	3.8.0

Table 11: Packages in Python 3.8.13 JupyterLab Runtimes - Nvidia GPU Edition

Library	Version
python	3.8.6
pip	21.1.3
cuda	11.4.1-1
libcudnn8	8.2.2.26-1
anyio	3.3.0
argcomplete	2.0.0
argon2-cffi	20.1.0
async-generator	1.10
attrs	20.3.0
Babel	2.9.1
backcall	0.2.0
beautifulsoup4	4.11.1
bitarray	2.1.0
bleach	3.3.1
certifi	2020.11.8
cffi	1.14.4
chardet	4.0.0
charset-normalizer	2.0.6
cycler	0.10.0
debugpy	1.6.0
decorator	4.4.2
defusedxml	0.6.0
entrypoints	0.4
fastjsonschema	2.15.3
idna	2.10
importlib-metadata	4.11.3
impyla	0.17.0
ipykernel	6.5.0
ipython	7.31.1
ipython-genutils	0.2.0
jedi	0.17.2

Library	Version
Jinja2	3.1.1
json5	0.9.5
jsonschema	3.2.0
jupyter-client	7.2.2
jupyter-core	4.9.2
jupyter-server	1.16.0
jupyterlab	3.2.8
jupyterlab-pygments	0.1.2
jupyterlab-server	2.7.2
kerberos	1.3.1
kiwisolver	1.3.1
MarkupSafe	2.1.1
matplotlib	3.3.4
matplotlib-inline	0.1.3
mistune	0.8.4
nbclassic	0.3.1
nbclient	0.5.1
nbconvert	6.5.0
nbformat	5.3.0
nest-asyncio	1.5.5
notebook	6.4.3
numpy	1.19.4
packaging	20.9
pandocfilters	1.4.3
parso	0.7.1
pexpect	4.8.0
pickleshare	0.7.5
Pillow	9.0.1
prometheus-client	0.9.0
prompt-toolkit	3.0.8
ptyprocess	0.6.0
pure-sasl	0.6.2
py4j	0.10.9.1
pycparser	2.20
Pygments	2.8.1
pyparsing	2.4.7
pyrsistent	0.17.3
python-dateutil	2.8.2
pytz	2021.1

Library	Version
pyzmq	22.3.0
requests	2.25.1
Send2Trash	1.5.0
six	1.15.0
sniffio	1.2.0
soupsieve	2.3.2
terminado	0.9.2
thrift	0.11.0
thrift-sasl	0.4.3
tinycss2	1.1.1
tornado	6.1
traitlets	5.1.1
typing-extensions	4.1.1
urllib3	1.26.6
wcwidth	0.2.5
webencodings	0.5.1
websocket-client	1.2.1
zipp	3.8.0

Python 3.7 Libraries for JupyterLab

This section lists the packages in Python 3.7 JupyterLab Runtimes that ship with ML Runtimes 2022.04.

Table 12: Packages in Python 3.7.13 JupyterLab Runtimes - Standard

Library	Version
python	3.7.11
pip	21.1.3
anyio	3.3.0
argcomplete	2.0.0
argon2-cffi	20.1.0
async-generator	1.10
attrs	20.3.0
Babel	2.9.1
backcall	0.2.0
beautifulsoup4	4.11.1
bitarray	2.1.0
bleach	3.3.1
certifi	2020.11.8
cffi	1.14.4
chardet	4.0.0

Library	Version
charset-normalizer	2.0.6
cycler	0.10.0
debugpy	1.6.0
decorator	4.4.2
defusedxml	0.6.0
entrypoints	0.4
fastjsonschema	2.15.3
idna	2.10
importlib-metadata	4.11.3
impyla	0.17.0
ipykernel	6.5.0
ipython	7.31.1
ipython-genutils	0.2.0
jedi	0.17.2
Jinja2	3.1.1
json5	0.9.5
jsonschema	3.2.0
jupyter-client	7.2.2
jupyter-core	4.9.2
jupyter-server	1.16.0
jupyterlab	3.2.8
jupyterlab-pygments	0.1.2
jupyterlab-server	2.7.2
kerberos	1.3.1
kiwisolver	1.3.1
MarkupSafe	2.1.1
matplotlib	3.3.4
matplotlib-inline	0.1.3
mistune	0.8.4
nbclassic	0.3.1
nbclient	0.5.1
nbconvert	6.5.0
nbformat	5.3.0
nest-asyncio	1.5.5
notebook	6.4.3
numpy	1.19.4
packaging	20.9
pandocfilters	1.4.3
parso	0.7.1

Library	Version
pexpect	4.8.0
pickleshare	0.7.5
Pillow	9.0.1
prometheus-client	0.9.0
prompt-toolkit	3.0.8
ptyprocess	0.6.0
pure-sasl	0.6.2
py4j	0.10.9.1
pycparser	2.20
Pygments	2.8.1
pyparsing	2.4.7
pyrsistent	0.17.3
python-dateutil	2.8.2
pytz	2021.1
pyzmq	22.3.0
requests	2.25.1
Send2Trash	1.5.0
six	1.15.0
sniffio	1.2.0
soupsieve	2.3.2
terminado	0.9.2
thrift	0.11.0
thrift-sasl	0.4.3
tinycss2	1.1.1
tornado	6.1
traitlets	5.1.1
typing-extensions	4.1.1
urllib3	1.26.6
wcwidth	0.2.5
webencodings	0.5.1
websocket-client	1.2.1
zipp	3.8.0

Table 13: Packages in Python 3.7.13 JupyterLab Runtimes - Nvidia GPU Edition

Library	Version
python	3.7.11
pip	21.1.3
cuda	11.4.1-1
libcudnn8	8.2.2.26-1

Library	Version
anyio	3.3.0
argcomplete	2.0.0
argon2-cffi	20.1.0
async-generator	1.10
attrs	20.3.0
Babel	2.9.1
backcall	0.2.0
beautifulsoup4	4.11.1
bitarray	2.1.0
bleach	3.3.1
certifi	2020.11.8
cffi	1.14.4
chardet	4.0.0
charset-normalizer	2.0.6
cycler	0.10.0
debugpy	1.6.0
decorator	4.4.2
defusedxml	0.6.0
entrypoints	0.4
fastjsonschema	2.15.3
idna	2.10
importlib-metadata	4.11.3
impyla	0.17.0
ipykernel	6.5.0
ipython	7.31.1
ipython-genutils	0.2.0
jedi	0.17.2
Jinja2	3.1.1
json5	0.9.5
jsonschema	3.2.0
jupyter-client	7.2.2
jupyter-core	4.9.2
jupyter-server	1.16.0
jupyterlab	3.2.8
jupyterlab-pygments	0.1.2
jupyterlab-server	2.7.2
kerberos	1.3.1
kiwisolver	1.3.1
MarkupSafe	2.1.1

Library	Version
matplotlib	3.3.4
matplotlib-inline	0.1.3
mistune	0.8.4
nbclassic	0.3.1
nbclient	0.5.1
nbconvert	6.5.0
nbformat	5.3.0
nest-asyncio	1.5.5
notebook	6.4.3
numpy	1.19.4
packaging	20.9
pandocfilters	1.4.3
parso	0.7.1
pexpect	4.8.0
pickleshare	0.7.5
Pillow	9.0.1
prometheus-client	0.9.0
prompt-toolkit	3.0.8
ptyprocess	0.6.0
pure-sasl	0.6.2
py4j	0.10.9.1
pycparser	2.20
Pygments	2.8.1
pyparsing	2.4.7
pyrsistent	0.17.3
python-dateutil	2.8.2
pytz	2021.1
pyzmq	22.3.0
requests	2.25.1
Send2Trash	1.5.0
six	1.15.0
sniffio	1.2.0
soupsieve	2.3.2
terminado	0.9.2
thrift	0.11.0
thrift-sasl	0.4.3
tinycss2	1.1.1
tornado	6.1
traitlets	5.1.1

Library	Version
typing-extensions	4.1.1
urllib3	1.26.6
wcwidth	0.2.5
webencodings	0.5.1
websocket-client	1.2.1
zipp	3.8.0

R 4.0 Libraries

This section lists the R 4.0 libraries that ship with ML Runtimes 2022.04.

Table 14: R 4.0.5 Libraries for Workbench

Library	Version
askpass	1.1
base	4.0.5
bitops	1.0-7
boot	1.3-27
brew	1.0-6
Cairo	1.2-0
caTools	1.18.2
cdsw	2.1
class	7.3-18
cli	3.0.1
cluster	2.1.1
codetools	0.2-18
colorspace	2.0-2
compiler	4.0.5
crayon	1.4.1
curl	4.3.2
datasets	4.0.5
digest	0.6.27
ellipsis	0.3.2
fansi	0.5.0
farver	2.1.0
foreign	0.8-81
ggplot2	3.3.5
glue	1.4.2
graphics	4.0.5
grDevices	4.0.5
grid	4.0.5

Library	Version
gtable	0.3.0
httr	1.4.2
isoband	0.2.5
jsonlite	1.7.2
KernSmooth	2.23-18
labeling	0.4.2
lattice	0.20-41
lifecycle	1.0.0
magrittr	2.0.1
MASS	7.3-53.1
Matrix	1.3-2
methods	4.0.5
mgcv	1.8-34
mime	0.11
munsell	0.5.0
nlme	3.1-152
nnet	7.3-15
openssl	1.4.4
parallel	4.0.5
pillar	1.6.2
pkgconfig	2.0.3
png	0.1-7
R6	2.5.1
RColorBrewer	1.1-2
RJSONIO	1.3-1.5
rlang	0.4.11
Rook	1.1-1
rpart	4.1-15
Rserve	1.7-0
scales	1.1.1
spatial	7.3-13
splines	4.0.5
stats	4.0.5
stats4	4.0.5
survival	3.2-10
sys	3.4
tcltk	4.0.5
tibble	3.1.4
tools	4.0.5

Library	Version
utf8	1.2.2
utils	4.0.5
vctrs	0.3.8
viridisLite	0.4.0
withr	2.4.2

R 4.1 Libraries

This section lists the R 4.1 libraries that ship with ML Runtimes 2022.04.

Table 15: R 4.1.1 Libraries for Workbench

Library	Version
askpass	1.1
base	4.1.1
bitops	1.0-7
boot	1.3-28
brew	1.0-6
Cairo	1.2-0
caTools	1.18.2
cdsw	2.1
class	7.3-19
cli	3.0.1
cluster	2.1.2
codetools	0.2-18
colorspace	2.0-2
compiler	4.1.1
crayon	1.4.1
curl	4.3.2
datasets	4.1.1
digest	0.6.27
ellipsis	0.3.2
fansi	0.5.0
farver	2.1.0
foreign	0.8-81
ggplot2	3.3.5
glue	1.4.2
graphics	4.1.1
grDevices	4.1.1
grid	4.1.1
gtable	0.3.0

Library	Version
httr	1.4.2
isoband	0.2.5
jsonlite	1.7.2
KernSmooth	2.23-20
labeling	0.4.2
lattice	0.20-44
lifecycle	1.0.0
magrittr	2.0.1
MASS	7.3-54
Matrix	1.3-4
methods	4.1.1
mgcv	1.8-36
mime	0.11
munsell	0.5.0
nlme	3.1-152
nnet	7.3-16
openssl	1.4.4
parallel	4.1.1
pillar	1.6.2
pkgconfig	2.0.3
png	0.1-7
R6	2.5.1
RColorBrewer	1.1-2
RJSONIO	1.3-1.5
rlang	0.4.11
Rook	1.1-1
rpart	4.1-15
Rserve	1.7-0
scales	1.1.1
spatial	7.3-14
splines	4.1.1
stats	4.1.1
stats4	4.1.1
survival	3.2-11
sys	3.4
tcltk	4.1.1
tibble	3.1.4
tools	4.1.1
utf8	1.2.2

Library	Version
utils	4.1.1
vctrs	0.3.8
viridisLite	0.4.0
withr	2.4.2

R 3.6 Libraries

This section lists the R 3.6 libraries that ship with ML Runtimes 2022.04.

Table 16: R 3.6.3 Libraries for Workbench

Library	Version
askpass	1.1
base	3.6.3
bitops	1.0-7
boot	1.3-24
brew	1.0-6
Cairo	1.2-0
caTools	1.18.2
cdsw	2.1
class	7.3-15
cli	3.0.1
cluster	2.1.0
codetools	0.2-16
colorspace	2.0-2
compiler	3.6.3
crayon	1.4.1
curl	4.3.2
datasets	3.6.3
digest	0.6.27
ellipsis	0.3.2
fansi	0.5.0
farver	2.1.0
foreign	0.8-75
ggplot2	3.3.5
glue	1.4.2
graphics	3.6.3
grDevices	3.6.3
grid	3.6.3
gtable	0.3.0
httr	1.4.2

Library	Version
isoband	0.2.5
jsonlite	1.7.2
KernSmooth	2.23-16
labeling	0.4.2
lattice	0.20-38
lifecycle	1.0.0
magrittr	2.0.1
MASS	7.3-51.5
Matrix	1.2-18
methods	3.6.3
mgcv	1.8-31
mime	0.11
munsell	0.5.0
nlme	3.1-144
nnet	7.3-12
openssl	1.4.4
parallel	3.6.3
pillar	1.6.2
pkgconfig	2.0.3
png	0.1-7
R6	2.5.1
RColorBrewer	1.1-2
RJSONIO	1.3-1.5
rlang	0.4.11
Rook	1.1-1
rpart	4.1-15
Rserve	1.7-0
scales	1.1.1
spatial	7.3-11
splines	3.6.3
stats	3.6.3
stats4	3.6.3
survival	3.1-8
sys	3.4
tcltk	3.6.3
tibble	3.1.4
tools	3.6.3
utf8	1.2.2
utils	3.6.3

Library	Version
vctr	0.3.8
viridisLite	0.4.0
withr	2.4.2

ML Runtimes 2021.12

This section lists the Python, R, and Scala libraries that ship with ML Runtimes 2021.12.



Note: Nvidia GPU Edition comes with CUDA 11.4.1 preinstalled.

Python 3.9 Libraries for Workbench

This section lists the packages in Python 3.9 Workbench Runtimes that ship with ML Runtimes 2021.12.

Table 17: Packages in Python 3.9.7 Workbench Runtimes - Standard

Library	Version
python	3.9.6
pip	21.1.3
backcall	0.2.0
bitarray	2.1.0
certifi	2021.5.30
charset-normalizer	2.0.6
cycler	0.10.0
decorator	4.4.2
idna	3.2
impyla	0.17.0
ipykernel	5.3.4
ipython	7.16.1
ipython-genutils	0.2.0
jedi	0.17.2
jupyter-client	6.1.7
jupyter-core	4.6.3
kerberos	1.3.1
kiwisolver	1.3.1
matplotlib	3.3.4
numpy	1.19.4
parso	0.7.1
pexpect	4.8.0
pickleshare	0.7.5
Pillow	8.4.0

Library	Version
prompt-toolkit	3.0.8
ptyprocess	0.6.0
pure-sasl	0.6.2
py4j	0.10.9.1
Pygments	2.8.1
pyparsing	2.4.7
python-dateutil	2.8.1
pyzmq	19.0.2
requests	2.26.0
six	1.15.0
thrift	0.11.0
thrift-sasl	0.4.3
tornado	6.1
traitlets	4.3.3
urllib3	1.26.6
wcwidth	0.2.5

Table 18: Packages in Python 3.9.7 Workbench Runtimes - Nvidia GPU Edition

Library	Version
python	3.9.6
pip	21.1.3
cuda	11.4.1-1
libcudnn8	8.2.2.26-1
backcall	0.2.0
bitarray	2.1.0
certifi	2021.5.30
charset-normalizer	2.0.6
cycler	0.10.0
decorator	4.4.2
idna	3.2
impyla	0.17.0
ipykernel	5.3.4
ipython	7.16.1
ipython-genutils	0.2.0
jedi	0.17.2
jupyter-client	6.1.7
jupyter-core	4.6.3
kerberos	1.3.1
kiwisolver	1.3.1

Library	Version
matplotlib	3.3.4
numpy	1.19.4
parso	0.7.1
pexpect	4.8.0
pickleshare	0.7.5
Pillow	8.4.0
prompt-toolkit	3.0.8
ptyprocess	0.6.0
pure-sasl	0.6.2
py4j	0.10.9.1
Pygments	2.8.1
pyparsing	2.4.7
python-dateutil	2.8.1
pyzmq	19.0.2
requests	2.26.0
six	1.15.0
thrift	0.11.0
thrift-sasl	0.4.3
tornado	6.1
traitlets	4.3.3
urllib3	1.26.6
wcwidth	0.2.5

Python 3.8 Libraries for Workbench

This section lists the packages in Python 3.8 Workbench Runtimes that ship with ML Runtimes 2021.12.

Table 19: Packages in Python 3.8.6 Workbench Runtimes - Standard

Library	Version
python	3.8.6
pip	21.1.3
backcall	0.2.0
bitarray	2.1.0
certifi	2021.5.30
charset-normalizer	2.0.6
cycler	0.10.0
decorator	4.4.2
idna	3.2
impyla	0.17.0
ipykernel	5.3.4

Library	Version
ipython	7.16.1
ipython-genutils	0.2.0
jedi	0.17.2
jupyter-client	6.1.7
jupyter-core	4.6.3
kerberos	1.3.1
kiwisolver	1.3.1
matplotlib	3.3.4
numpy	1.19.4
parso	0.7.1
pexpect	4.8.0
pickleshare	0.7.5
Pillow	8.4.0
prompt-toolkit	3.0.8
ptyprocess	0.6.0
pure-sasl	0.6.2
py4j	0.10.9.1
Pygments	2.8.1
pyparsing	2.4.7
python-dateutil	2.8.1
pyzmq	19.0.2
requests	2.26.0
six	1.15.0
thrift	0.11.0
thrift-sasl	0.4.3
tornado	6.1
traitlets	4.3.3
urllib3	1.26.6
wcwidth	0.2.5

Table 20: Packages in Python 3.8.6 Workbench Runtimes - Nvidia GPU Edition

Library	Version
python	3.8.6
pip	21.1.3
cuda	11.4.1-1
libcudnn8	8.2.2.26-1
backcall	0.2.0
bitarray	2.1.0
certifi	2021.5.30

Library	Version
charset-normalizer	2.0.6
cycler	0.10.0
decorator	4.4.2
idna	3.2
impyla	0.17.0
ipykernel	5.3.4
ipython	7.16.1
ipython-genutils	0.2.0
jedi	0.17.2
jupyter-client	6.1.7
jupyter-core	4.6.3
kerberos	1.3.1
kiwisolver	1.3.1
matplotlib	3.3.4
numpy	1.19.4
parso	0.7.1
pexpect	4.8.0
pickleshare	0.7.5
Pillow	8.4.0
prompt-toolkit	3.0.8
ptyprocess	0.6.0
pure-sasl	0.6.2
py4j	0.10.9.1
Pygments	2.8.1
pyparsing	2.4.7
python-dateutil	2.8.1
pyzmq	19.0.2
requests	2.26.0
six	1.15.0
thrift	0.11.0
thrift-sasl	0.4.3
tornado	6.1
traitlets	4.3.3
urllib3	1.26.6
wcwidth	0.2.5

Table 21: Packages in Python 3.8.6 Workbench Runtimes - RAPIDS

Library	Version
python	3.8.6

Library	Version
pip	21.1.3
_libgcc_mutex	0.1
_openmp_mutex	4.5
abseil-cpp	20210324.2
aiohttp	3.8.1
aiosignal	1.2.0
anyio	3.4.0
appdirs	1.4.4
argon2-cffi	21.1.0
arrow-cpp	5.0.0
arrow-cpp-proc	3.0.0
async-timeout	4.0.1
async_generator	1.10
attrs	21.2.0
aws-c-auth	0.6.7
aws-c-cal	0.5.12
aws-c-common	0.6.17
aws-c-compression	0.2.14
aws-c-event-stream	0.2.7
aws-c-http	0.6.10
aws-c-io	0.10.13
aws-c-mqtt	0.7.9
aws-c-s3	0.1.27
aws-c-sdkutils	0.1.1
aws-checksums	0.1.12
aws-crt-cpp	0.17.8
aws-sdk-cpp	1.9.145
backcall	0.2.0
backports	1.0
backports.functools_lru_cache	1.6.4
bleach	4.1.0
blosc	1.21.0
bokeh	2.4.0
boost	1.74.0
boost-cpp	1.74.0
brotli	1.0.9
brotli-bin	1.0.9
brotlipy	0.7.0
brunsli	0.1

Library	Version
bzip2	1.0.8
c-ares	1.18.1
c-blosc2	2.0.4
ca-certificates	2021.10.8
cachetools	4.2.4
cairo	1.16.0
cdsw	1.1.0
certifi	2021.5.30
cffi	1.15.0
cfitsio	3.470
charls	2.2.0
charset-normalizer	2.0.6
click	8.0.3
click-plugins	1.1.1
cligj	0.7.2
cloudpickle	2.0.0
colorama	0.4.4
colorcet	3.0.0
cryptography	36.0.1
cucim	21.12.00
cuda-toolkit	11.0.221
cudf	21.12.02
cudf_kafka	21.12.02
cudnn	8.2.1.32
cugraph	21.12.00
cuml	21.12.00
cupy	9.6.0
curl	7.80.0
cusignal	21.12.00
cuspatial	21.12.00
custreamz	21.12.02
cuxfilter	21.12.00
cycler	0.11.0
cyrus-sasl	2.1.27
cytoolz	0.11.2
dask	2021.11.2
dask-core	2021.11.2
dask-cuda	21.12.00
dask-cudf	21.12.02

Library	Version
datashader	0.11.1
datashape	0.5.4
debugpy	1.5.1
decorator	5.1.0
defusedxml	0.7.1
distributed	2021.11.2
dlpack	0.5
entrypoints	0.3
expat	2.4.1
faiss-proc	1.0.0
fastavro	1.4.7
fastrlock	0.8
fiona	1.8.20
font-ttf-dejavu-sans-mono	2.37
font-ttf-inconsolata	3.000
font-ttf-source-code-pro	2.038
font-ttf-ubuntu	0.83
fontconfig	2.13.1
fonts-conda-ecosystem	1
fonts-conda-forge	1
fonttools	4.28.4
freetype	2.10.4
freexl	1.0.6
frozenset	1.2.0
fsspec	2021.11.1
gdal	3.3.2
geopandas	0.9.0
geopandas-base	0.9.0
geos	3.9.1
geotiff	1.7.0
gettext	0.19.8.1
gflags	2.2.2
giflib	5.2.1
git	2.34.1
glog	0.5.0
gpuci-tools	0.3.1
grpc-cpp	1.41.1
hdf4	4.2.15
hdf5	1.12.1

Library	Version
heapdict	1.0.1
icu	68.2
idna	3.2
imagecodecs	2021.8.26
imageio	2.13.3
importlib-metadata	4.8.3
importlib_metadata	4.8.3
importlib_resources	5.4.0
ipykernel	6.6.0
ipython	7.30.1
ipython_genutils	0.2.0
ipywidgets	7.6.5
jbig	2.1
jedi	0.18.1
jinja2	3.0.3
joblib	1.1.0
jpeg	9d
json-c	0.15
jsonschema	4.3.1
jupyter-server-proxy	3.2.0
jupyter_client	7.1.0
jupyter_core	4.9.1
jupyter_server	1.13.1
jupyterlab_pygments	0.1.2
jupyterlab_widgets	1.0.2
jxrllib	1.1
kealib	1.4.14
kiwisolver	1.3.2
krb5	1.19.2
lcms2	2.12
ld_impl_linux-64	2.36.1
lerc	3.0
libaec	1.0.6
libblas	3.9.0
libbrotlicommon	1.0.9
libbrotlidec	1.0.9
libbrotlienc	1.0.9
libcblas	3.9.0
libcucim	21.12.00

Library	Version
libcudf	21.12.02
libcudf_kafka	21.12.02
libcugraph	21.12.00
libcuml	21.12.00
libcumlprims	21.12.00
libcurl	7.80.0
libcusolver	11.3.2.107
libcuspatial	21.12.00
libdap4	3.20.6
libdeflate	1.8
libedit	3.1.20191231
libev	4.33
libevent	2.1.10
libfaiss	1.7.0
libffi	3.4.2
libgcc-ng	9.4.0
libgcrypt	1.9.4
libgdal	3.3.2
libgfortran-ng	11.2.0
libgfortran5	11.2.0
libglib	2.70.2
libgpg-error	1.42
libgsasl	1.10.0
libhwloc	2.3.0
libiconv	1.16
libkml	1.3.0
liblapack	3.9.0
libllvm11	11.1.0
libnetcdf	4.8.1
libnghttp2	1.43.0
libns1	2.0.0
libntlm	1.4
libopenblas	0.3.18
libpng	1.6.37
libpq	13.5
libprotobuf	3.18.1
librdkafka	1.6.1
librmm	21.12.00
librttopo	1.1.0

Library	Version
libsodium	1.0.18
libspatialindex	1.9.3
libspatialite	5.0.1
libssh2	1.10.0
libstdcxx-ng	9.4.0
libthrift	0.15.0
libtiff	4.3.0
libutf8proc	2.7.0
libuuid	2.32.1
libuv	1.42.0
libwebp	1.2.1
libwebp-base	1.2.1
libxcb	1.13
libxgboost	1.5.0dev.rapidsai21.12
libxml2	2.9.12
libzip	1.8.0
libzlib	1.2.11
libzopfli	1.0.3
llvm-openmp	12.0.1
llvmlite	0.37.0
loket	0.2.0
lz4-c	1.9.3
mapclassify	2.4.3
markdown	3.3.6
markupsafe	2.0.1
matplotlib-base	3.5.1
matplotlib-inline	0.1.3
mistune	0.8.4
msgpack-python	1.0.3
multidict	5.2.0
multipledispatch	0.6.0
munch	2.5.0
munkres	1.1.4
nbclient	0.5.9
nbconvert	6.3.0
nbformat	5.1.3
nccl	2.11.4.1
ncurses	6.2
nest-asyncio	1.5.4

Library	Version
networkx	2.6.3
nodejs	14.17.4
notebook	6.4.6
nspr	4.32
nss	3.73
numba	0.54.1
numpy	1.20.3
nvtx	0.2.3
olefile	0.46
openjpeg	2.4.0
openssl	1.1.1i
orc	1.7.1
packaging	21.3
pandas	1.3.5
pandoc	2.16.2
pandocfilters	1.5.0
panel	0.12.4
param	1.12.0
parquet-cpp	1.5.1
parso	0.8.3
partd	1.2.0
pcre	8.45
pcre2	10.37
perl	5.32.1
pexpect	4.8.0
pickleshare	0.7.5
pillow	8.4.0
pip	21.3.1
pixmap	0.40.0
pooch	1.5.2
poppler	21.09.0
poppler-data	0.4.11
postgresql	13.5
proj	8.1.0
prometheus_client	0.12.0
prompt-toolkit	3.0.24
protobuf	3.18.1
psutil	5.8.0
pthread-stubs	0.4

Library	Version
ptxcompiler	0.2.0
ptyprocess	0.7.0
py-xgboost	1.5.0dev.rapidsai21.12
py4j	0.10.9
pyarrow	5.0.0
pycparser	2.21
pyct	0.4.6
pyct-core	0.4.6
pydeck	0.5.0
pyee	8.1.0
pygments	2.10.0
pynvml	11.4.1
pyopenssl	21.0.0
pyparsing	3.0.6
pypeteer	0.2.6
pyproj	3.1.0
pyrsistent	0.18.0
pysocks	1.7.1
python	3.8.12
python-confluent-kafka	1.6.0
python-dateutil	2.8.2
python_abi	3.8
pytz	2021.3
pyviz_comms	2.1.0
pywavelets	1.2.0
pyyaml	6.0
pyzmq	22.3.0
rapids	21.12.00
rapids-xgboost	21.12.00
re2	2021.11.01
readline	8.1
requests	2.26.0
rmm	21.12.00
rtree	0.9.7
s2n	1.3.0
scikit-image	0.18.1
scikit-learn	1.0.1
scipy	1.7.3
send2trash	1.8.0

Library	Version
setuptools	59.6.0
shapely	1.8.0
simpervisor	0.4
six	1.16.0
snappy	1.1.8
sniffio	1.2.0
sortedcontainers	2.4.0
spdlog	1.8.5
sqlite	3.37.0
streamz	0.6.3
tblib	1.7.0
terminado	0.12.1
testpath	0.5.0
threadpoolctl	3.0.0
tifffile	2021.11.2
tiledb	2.3.4
tk	8.6.11
toolz	0.11.2
tornado	6.1
tqdm	4.62.3
traitlets	5.1.1
treelite	2.1.0
treelite-runtime	2.1.0
typing-extensions	4.0.1
typing_extensions	4.0.1
tzcode	2021e
tzdata	2021e
ucx	1.11.2+gef2bbcf
ucx-proc	1.0.0
ucx-py	0.23.0
unicodedata2	13.0.0.post2
urllib3	1.26.6
wcwidth	0.2.5
webencodings	0.5.1
websocket-client	1.2.3
websockets	9.1
wheel	0.37.0
widetsnbextension	3.5.2
xarray	0.20.2

Library	Version
xerces-c	3.2.3
xgboost	1.5.0dev.rapidsai21.12
xorg-kbproto	1.0.7
xorg-libice	1.0.10
xorg-libsm	1.2.3
xorg-libx11	1.7.2
xorg-libxau	1.0.9
xorg-libxdmcp	1.1.3
xorg-libxext	1.3.4
xorg-libxrender	0.9.10
xorg-renderproto	0.11.1
xorg-xextproto	7.3.0
xorg-xproto	7.0.31
xz	5.2.5
yaml	0.2.5
yaml	1.7.2
zeromq	4.3.4
zfp	0.5.5
zict	2.0.0
zipp	3.6.0
zlib	1.2.11
zstd	1.5.0

Python 3.7 Libraries for Workbench

This section lists the packages in Python 3.7 Workbench Runtimes that ship with ML Runtimes 2021.12.

Table 22: Packages in Python 3.7.11 Workbench Runtimes - Standard

Library	Version
python	3.7.11
pip	21.1.3
backcall	0.2.0
bitarray	2.1.0
certifi	2021.5.30
charset-normalizer	2.0.6
cycler	0.10.0
decorator	4.4.2
idna	3.2
impyla	0.17.0
ipykernel	5.3.4

Library	Version
ipython	7.16.1
ipython-genutils	0.2.0
jedi	0.17.2
jupyter-client	6.1.7
jupyter-core	4.6.3
kerberos	1.3.1
kiwisolver	1.3.1
matplotlib	3.3.4
numpy	1.19.4
parso	0.7.1
pexpect	4.8.0
pickleshare	0.7.5
Pillow	8.4.0
prompt-toolkit	3.0.8
ptyprocess	0.6.0
pure-sasl	0.6.2
py4j	0.10.9.1
Pygments	2.8.1
pyparsing	2.4.7
python-dateutil	2.8.1
pyzmq	19.0.2
requests	2.26.0
six	1.15.0
thrift	0.11.0
thrift-sasl	0.4.3
tornado	6.1
traitlets	4.3.3
urllib3	1.26.6
wcwidth	0.2.5

Table 23: Packages in Python 3.7.11 Workbench Runtimes - Nvidia GPU Edition

Library	Version
python	3.7.11
pip	21.1.3
cuda	11.4.1-1
libcudnn8	8.2.2.26-1
backcall	0.2.0
bitarray	2.1.0
certifi	2021.5.30

Library	Version
charset-normalizer	2.0.6
cycler	0.10.0
decorator	4.4.2
idna	3.2
impyla	0.17.0
ipykernel	5.3.4
ipython	7.16.1
ipython-genutils	0.2.0
jedi	0.17.2
jupyter-client	6.1.7
jupyter-core	4.6.3
kerberos	1.3.1
kiwisolver	1.3.1
matplotlib	3.3.4
numpy	1.19.4
parso	0.7.1
pexpect	4.8.0
pickleshare	0.7.5
Pillow	8.4.0
prompt-toolkit	3.0.8
ptyprocess	0.6.0
pure-sasl	0.6.2
py4j	0.10.9.1
Pygments	2.8.1
pyparsing	2.4.7
python-dateutil	2.8.1
pyzmq	19.0.2
requests	2.26.0
six	1.15.0
thrift	0.11.0
thrift-sasl	0.4.3
tornado	6.1
traitlets	4.3.3
urllib3	1.26.6
wcwidth	0.2.5

Table 24: Packages in Python 3.7.11 Workbench Runtimes - RAPIDS

Library	Version
python	3.7.11

Library	Version
pip	21.1.3
cuda	11.4.1-1
_libgcc_mutex	0.1
_openmp_mutex	4.5
abseil-cpp	20210324.2
aiohttp	3.8.1
aiosignal	1.2.0
anyio	3.4.0
appdirs	1.4.4
argcomplete	1.12.3
argon2-cffi	21.1.0
arrow-cpp	5.0.0
arrow-cpp-proc	3.0.0
async-timeout	4.0.1
async_generator	1.10
asynctest	0.13.0
attrs	21.2.0
aws-c-auth	0.6.7
aws-c-cal	0.5.12
aws-c-common	0.6.17
aws-c-compression	0.2.14
aws-c-event-stream	0.2.7
aws-c-http	0.6.10
aws-c-io	0.10.13
aws-c-mqtt	0.7.9
aws-c-s3	0.1.27
aws-c-sdkutils	0.1.1
aws-checksums	0.1.12
aws-crt-cpp	0.17.8
aws-sdk-cpp	1.9.145
backcall	0.2.0
backports	1.0
backports.functools_lru_cache	1.6.4
bleach	4.1.0
blosc	1.21.0
bokeh	2.4.0
boost	1.74.0
boost-cpp	1.74.0
brotli	1.0.9

Library	Version
brofli-bin	1.0.9
brotlipy	0.7.0
brunsl	0.1
bzip2	1.0.8
c-ares	1.18.1
c-blosc2	2.0.4
ca-certificates	2021.10.8
cachetools	4.2.4
cairo	1.16.0
cdsw	1.1.0
certifi	2021.5.30
cffi	1.15.0
cfitsio	3.470
charls	2.2.0
charset-normalizer	2.0.6
click	8.0.3
click-plugins	1.1.1
cligj	0.7.2
cloudpickle	2.0.0
colorama	0.4.4
colorcet	3.0.0
cryptography	36.0.1
cucim	21.12.00
cuda-toolkit	11.0.221
cudf	21.12.02
cudf_kafka	21.12.02
cudnn	8.2.1.32
cugraph	21.12.00
cuml	21.12.00
cupy	9.6.0
curl	7.80.0
cusignal	21.12.00
cuspatial	21.12.00
custreamz	21.12.02
cuxfilter	21.12.00
cycler	0.11.0
cyrus-sasl	2.1.27
cytoolz	0.11.2
dask	2021.11.2

Library	Version
dask-core	2021.11.2
dask-cuda	21.12.00
dask-cudf	21.12.02
datashader	0.11.1
datashape	0.5.4
debugpy	1.5.1
decorator	5.1.0
defusedxml	0.7.1
distributed	2021.11.2
dlpack	0.5
entrypoints	0.3
expat	2.4.1
faiss-proc	1.0.0
fastavro	1.4.7
fastrlock	0.8
fiona	1.8.20
font-ttf-dejavu-sans-mono	2.37
font-ttf-inconsolata	3.000
font-ttf-source-code-pro	2.038
font-ttf-ubuntu	0.83
fontconfig	2.13.1
fonts-conda-ecosystem	1
fonts-conda-forge	1
fonttools	4.28.4
freetype	2.10.4
freexl	1.0.6
frozenset	1.2.0
fsspec	2021.11.1
gdal	3.3.2
geopandas	0.9.0
geopandas-base	0.9.0
geos	3.9.1
geotiff	1.7.0
gettext	0.19.8.1
gflags	2.2.2
giflib	5.2.1
git	2.34.1
glog	0.5.0
gpuci-tools	0.3.1

Library	Version
grpc-cpp	1.41.1
hdf4	4.2.15
hdf5	1.12.1
heapdict	1.0.1
icu	68.2
idna	3.2
imagecodecs	2021.8.26
imageio	2.13.3
importlib-metadata	4.8.3
importlib_metadata	4.8.3
importlib_resources	5.4.0
ipykernel	6.6.0
ipython	7.30.1
ipython_genutils	0.2.0
ipywidgets	7.6.5
jbig	2.1
jedi	0.18.1
jinja2	3.0.3
joblib	1.1.0
jpeg	9d
json-c	0.15
jsonschema	4.3.1
jupyter-server-proxy	3.2.0
jupyter_client	7.1.0
jupyter_core	4.9.1
jupyter_server	1.13.1
jupyterlab_pygments	0.1.2
jupyterlab_widgets	1.0.2
jxrlib	1.1
kealib	1.4.14
kiwisolver	1.3.2
krb5	1.19.2
lcms2	2.12
ld_impl_linux-64	2.36.1
lerc	3.0
libaec	1.0.6
libblas	3.9.0
libbrotlicommon	1.0.9
libbrotlidec	1.0.9

Library	Version
libbrotlienc	1.0.9
libblas	3.9.0
libcucim	21.12.00
libcudf	21.12.02
libcudf_kafka	21.12.02
libcugraph	21.12.00
libcuml	21.12.00
libcumlprims	21.12.00
libcurl	7.80.0
libcusolver	11.3.2.107
libcuspatial	21.12.00
libdap4	3.20.6
libdeflate	1.8
libedit	3.1.20191231
libev	4.33
libevent	2.1.10
libfaiss	1.7.0
libffi	3.4.2
libgcc-ng	9.4.0
libgcrypt	1.9.4
libgdal	3.3.2
libgfortran-ng	11.2.0
libgfortran5	11.2.0
libglib	2.70.2
libgpg-error	1.42
libgsasl	1.10.0
libhwloc	2.3.0
libiconv	1.16
libkml	1.3.0
liblapack	3.9.0
libllvm11	11.1.0
libnetcdf	4.8.1
libnghttp2	1.43.0
libns1	2.0.0
libntlm	1.4
libopenblas	0.3.18
libpng	1.6.37
libpq	13.5
libprotobuf	3.18.1

Library	Version
librdkafka	1.6.1
librmm	21.12.00
librttopo	1.1.0
libsodium	1.0.18
libspatialindex	1.9.3
libspatialite	5.0.1
libssh2	1.10.0
libstdcxx-ng	9.4.0
libthrift	0.15.0
libtiff	4.3.0
libutf8proc	2.7.0
libuuid	2.32.1
libuv	1.42.0
libwebp	1.2.1
libwebp-base	1.2.1
libxcb	1.13
libxgboost	1.5.0dev.rapidsai21.12
libxml2	2.9.12
libzip	1.8.0
libzlib	1.2.11
libzopfli	1.0.3
llvm-openmp	12.0.1
llvmlite	0.37.0
loket	0.2.0
lz4-c	1.9.3
mapclassify	2.4.3
markdown	3.3.6
markupsafe	2.0.1
matplotlib-base	3.5.1
matplotlib-inline	0.1.3
mistune	0.8.4
msgpack-python	1.0.3
multidict	5.2.0
multipledispatch	0.6.0
munch	2.5.0
munkres	1.1.4
nbclient	0.5.9
nbconvert	6.3.0
nbformat	5.1.3

Library	Version
nccl	2.11.4.1
ncurses	6.2
nest-asyncio	1.5.4
networkx	2.6.3
nodejs	14.17.4
notebook	6.4.6
nspr	4.32
nss	3.73
numba	0.54.1
numpy	1.20.3
nvtx	0.2.3
olefile	0.46
openjpeg	2.4.0
openssl	1.1.1l
orc	1.7.1
packaging	21.3
pandas	1.3.5
pandoc	2.16.2
pandocfilters	1.5.0
panel	0.12.4
param	1.12.0
parquet-cpp	1.5.1
parso	0.8.3
partd	1.2.0
pcre	8.45
pcre2	10.37
perl	5.32.1
pexpect	4.8.0
pickle5	0.0.12
pickleshare	0.7.5
pillow	8.4.0
pip	21.3.1
pixman	0.40.0
pooch	1.5.2
poppler	21.09.0
poppler-data	0.4.11
postgresql	13.5
proj	8.1.0
prometheus_client	0.12.0

Library	Version
prompt-toolkit	3.0.24
protobuf	3.18.1
psutil	5.8.0
pthread-stubs	0.4
ptxcompiler	0.2.0
ptyprocess	0.7.0
py-xgboost	1.5.0dev.rapidsai21.12
py4j	0.10.9
pyarrow	5.0.0
pycparser	2.21
pyct	0.4.6
pyct-core	0.4.6
pydeck	0.5.0
pyee	8.1.0
pygments	2.10.0
pynvml	11.4.1
pyopenssl	21.0.0
yparsing	3.0.6
pypeteer	0.2.6
pyproj	3.1.0
pyrsistent	0.18.0
pysocks	1.7.1
python	3.7.12
python-confluent-kafka	1.6.0
python-dateutil	2.8.2
python_abi	3.7
pytz	2021.3
pyviz_comms	2.1.0
pywavelets	1.2.0
pyyaml	6.0
pyzmq	22.3.0
rapids	21.12.00
rapids-xgboost	21.12.00
re2	2021.11.01
readline	8.1
requests	2.26.0
rmm	21.12.00
rtree	0.9.7
s2n	1.3.0

Library	Version
scikit-image	0.18.1
scikit-learn	1.0.1
scipy	1.7.3
send2trash	1.8.0
setuptools	59.6.0
shapely	1.8.0
simpervisor	0.4
six	1.16.0
snappy	1.1.8
sniffio	1.2.0
sortedcontainers	2.4.0
spdlog	1.8.5
sqlite	3.37.0
streamz	0.6.3
tblib	1.7.0
terminado	0.12.1
testpath	0.5.0
threadpoolctl	3.0.0
tifffile	2021.11.2
tiledb	2.3.4
tk	8.6.11
toolz	0.11.2
tornado	6.1
tqdm	4.62.3
traitlets	5.1.1
treelite	2.1.0
treelite-runtime	2.1.0
typing-extensions	4.0.1
typing_extensions	4.0.1
tzcode	2021e
tzdata	2021e
ucx	1.11.2+gef2bbcf
ucx-proc	1.0.0
ucx-py	0.23.0
unicodedata2	13.0.0.post2
urllib3	1.26.6
wcwidth	0.2.5
webencodings	0.5.1
websocket-client	1.2.3

Library	Version
websockets	9.1
wheel	0.37.0
widgetsnbextension	3.5.2
xarray	0.20.2
xerces-c	3.2.3
xgboost	1.5.0dev.rapidsai21.12
xorg-kbproto	1.0.7
xorg-libice	1.0.10
xorg-libsm	1.2.3
xorg-libx11	1.7.2
xorg-libxau	1.0.9
xorg-libxdmcp	1.1.3
xorg-libxext	1.3.4
xorg-libxrender	0.9.10
xorg-renderproto	0.11.1
xorg-xextproto	7.3.0
xorg-xproto	7.0.31
xz	5.2.5
yaml	0.2.5
yaml	1.7.2
zeromq	4.3.4
zfp	0.5.5
zict	2.0.0
zipp	3.6.0
zlib	1.2.11
zstd	1.5.0

Scala 2.11 Libraries for Workbench

This section lists the packages in Scala 2.11.12 Workbench Runtimes that ship with ML Runtimes 2021.12.

Scala 2.11.12 Libraries for Workbench - Standard

Library	Version
org.scala-lang:scala-library	2.11.12
org.scalatest:scalatest	2.2.4
org.scala-lang:scala-compiler	2.11.12
io.circe:circe-generic	0.11.2
io.circe:circe-parser	0.11.2
org.scalameta:scalameta	1.0.0

Python 3.9.6 Libraries for JupyterLab

This section lists the packages in Python 3.9 JupyterLab Runtimes that ship with ML Runtimes 2021.12.

Table 25: Packages in Python 3.9.6 JupyterLab Runtimes - Standard

Library	Version
python	3.9.6
pip	21.1.3
anyio	3.3.0
argon2-cffi	20.1.0
async-generator	1.10
attrs	20.3.0
Babel	2.9.1
backcall	0.2.0
bitarray	2.1.0
bleach	3.3.1
certifi	2020.11.8
cffi	1.14.4
chardet	4.0.0
charset-normalizer	2.0.6
cycler	0.10.0
decorator	4.4.2
defusedxml	0.6.0
entrypoints	0.3
idna	2.10
impyla	0.17.0
ipykernel	5.3.4
ipython	7.16.1
ipython-genutils	0.2.0
jedi	0.17.2
Jinja2	2.11.3
json5	0.9.5
jsonschema	3.2.0
jupyter-client	6.1.7
jupyter-core	4.6.3
jupyter-server	1.10.2
jupyterlab	3.2.8
jupyterlab-pygments	0.1.2
jupyterlab-server	2.7.2
kerberos	1.3.1
kiwisolver	1.3.1
MarkupSafe	1.1.1
matplotlib	3.3.4

Library	Version
mistune	0.8.4
nbclassic	0.3.1
nbclient	0.5.1
nbconvert	6.0.7
nbformat	5.1.3
nest-asyncio	1.5.1
notebook	6.4.3
numpy	1.19.4
packaging	20.9
pandocfilters	1.4.3
parso	0.7.1
pexpect	4.8.0
pickleshare	0.7.5
Pillow	8.4.0
prometheus-client	0.9.0
prompt-toolkit	3.0.8
ptyprocess	0.6.0
pure-sasl	0.6.2
py4j	0.10.9.1
pycparser	2.20
Pygments	2.8.1
pyparsing	2.4.7
pyrsistent	0.17.3
python-dateutil	2.8.1
pytz	2021.1
pyzmq	19.0.2
requests	2.25.1
requests-unixsocket	0.2.0
Send2Trash	1.5.0
six	1.15.0
sniffio	1.2.0
terminado	0.9.2
testpath	0.4.4
thrift	0.11.0
thrift-sasl	0.4.3
tornado	6.1
traitlets	4.3.3
urllib3	1.26.6
wcwidth	0.2.5

Library	Version
webencodings	0.5.1
websocket-client	1.2.1

Table 26: Packages in Python 3.9.6 JupyterLab Runtimes - Nvidia GPU Edition

Library	Version
python	3.9.6
pip	21.1.3
cuda	11.4.1-1
libcudnn8	8.2.2.26-1
anyio	3.3.0
argon2-cffi	20.1.0
async-generator	1.10
attrs	20.3.0
Babel	2.9.1
backcall	0.2.0
bitarray	2.1.0
bleach	3.3.1
certifi	2020.11.8
cffi	1.14.4
chardet	4.0.0
charset-normalizer	2.0.6
cycler	0.10.0
decorator	4.4.2
defusedxml	0.6.0
entrypoints	0.3
idna	2.10
impyla	0.17.0
ipykernel	5.3.4
ipython	7.16.1
ipython-genutils	0.2.0
jedi	0.17.2
Jinja2	2.11.3
json5	0.9.5
jsonschema	3.2.0
jupyter-client	6.1.7
jupyter-core	4.6.3
jupyter-server	1.10.2
jupyterlab	3.2.8
jupyterlab-pygments	0.1.2

Library	Version
jupyterlab-server	2.7.2
kerberos	1.3.1
kiwisolver	1.3.1
MarkupSafe	1.1.1
matplotlib	3.3.4
mistune	0.8.4
nbclassic	0.3.1
nbclient	0.5.1
nbconvert	6.0.7
nbformat	5.1.3
nest-asyncio	1.5.1
notebook	6.4.3
numpy	1.19.4
packaging	20.9
pandocfilters	1.4.3
parso	0.7.1
pexpect	4.8.0
pickleshare	0.7.5
Pillow	8.4.0
prometheus-client	0.9.0
prompt-toolkit	3.0.8
ptyprocess	0.6.0
pure-sasl	0.6.2
py4j	0.10.9.1
pycparser	2.20
Pygments	2.8.1
pyparsing	2.4.7
pyrsistent	0.17.3
python-dateutil	2.8.1
pytz	2021.1
pyzmq	19.0.2
requests	2.25.1
requests-unixsocket	0.2.0
Send2Trash	1.5.0
six	1.15.0
sniffio	1.2.0
terminado	0.9.2
testpath	0.4.4
thrift	0.11.0

Library	Version
thrift-sasl	0.4.3
tornado	6.1
traitlets	4.3.3
urllib3	1.26.6
wcwidth	0.2.5
webencodings	0.5.1
websocket-client	1.2.1

Python 3.8 Libraries for JupyterLab

This section lists the packages in Python 3.8 JupyterLab Runtimes that ship with ML Runtimes 2021.012.

Table 27: Packages in Python 3.8.6 JupyterLab Runtimes - Standard

Library	Version
python	3.8.6
pip	21.1.3
anyio	3.3.0
argon2-cffi	20.1.0
async-generator	1.10
attrs	20.3.0
Babel	2.9.1
backcall	0.2.0
bitarray	2.1.0
bleach	3.3.1
certifi	2020.11.8
cffi	1.14.4
chardet	4.0.0
charset-normalizer	2.0.6
cycler	0.10.0
decorator	4.4.2
defusedxml	0.6.0
entrypoints	0.3
idna	2.10
impyla	0.17.0
ipykernel	5.3.4
ipython	7.16.1
ipython-genutils	0.2.0
jedi	0.17.2
Jinja2	2.11.3
json5	0.9.5

Library	Version
jsonschema	3.2.0
jupyter-client	6.1.7
jupyter-core	4.6.3
jupyter-server	1.10.2
jupyterlab	3.2.8
jupyterlab-pygments	0.1.2
jupyterlab-server	2.7.2
kerberos	1.3.1
kiwisolver	1.3.1
MarkupSafe	1.1.1
matplotlib	3.3.4
mistune	0.8.4
nbclassic	0.3.1
nbclient	0.5.1
nbconvert	6.0.7
nbformat	5.1.3
nest-asyncio	1.5.1
notebook	6.4.3
numpy	1.19.4
packaging	20.9
pandocfilters	1.4.3
parso	0.7.1
pexpect	4.8.0
pickleshare	0.7.5
Pillow	8.4.0
prometheus-client	0.9.0
prompt-toolkit	3.0.8
ptyprocess	0.6.0
pure-sasl	0.6.2
py4j	0.10.9.1
pycparser	2.20
Pygments	2.8.1
pyparsing	2.4.7
pyrsistent	0.17.3
python-dateutil	2.8.1
pytz	2021.1
pyzmq	19.0.2
requests	2.25.1
requests-unixsocket	0.2.0

Library	Version
Send2Trash	1.5.0
six	1.15.0
sniffio	1.2.0
terminado	0.9.2
testpath	0.4.4
thrift	0.11.0
thrift-sasl	0.4.3
tornado	6.1
traitlets	4.3.3
urllib3	1.26.6
wcwidth	0.2.5
webencodings	0.5.1
websocket-client	1.2.1

Table 28: Packages in Python 3.8.6 JupyterLab Runtimes - Nvidia GPU Edition

Library	Version
python	3.8.6
pip	21.1.3
cuda	11.4.1-1
libcudnn8	8.2.2.26-1
anyio	3.3.0
argon2-cffi	20.1.0
async-generator	1.10
attrs	20.3.0
Babel	2.9.1
backcall	0.2.0
bitarray	2.1.0
bleach	3.3.1
certifi	2020.11.8
cffi	1.14.4
chardet	4.0.0
charset-normalizer	2.0.6
cycler	0.10.0
decorator	4.4.2
defusedxml	0.6.0
entrypoints	0.3
idna	2.10
impyla	0.17.0
ipykernel	5.3.4

Library	Version
ipython	7.16.1
ipython-genutils	0.2.0
jedi	0.17.2
Jinja2	2.11.3
json5	0.9.5
jsonschema	3.2.0
jupyter-client	6.1.7
jupyter-core	4.6.3
jupyter-server	1.10.2
jupyterlab	3.2.8
jupyterlab-pygments	0.1.2
jupyterlab-server	2.7.2
kerberos	1.3.1
kiwisolver	1.3.1
MarkupSafe	1.1.1
matplotlib	3.3.4
mistune	0.8.4
nbclassic	0.3.1
nbclient	0.5.1
nbconvert	6.0.7
nbformat	5.1.3
nest-asyncio	1.5.1
notebook	6.4.3
numpy	1.19.4
packaging	20.9
pandocfilters	1.4.3
parso	0.7.1
pexpect	4.8.0
pickleshare	0.7.5
Pillow	8.4.0
prometheus-client	0.9.0
prompt-toolkit	3.0.8
ptyprocess	0.6.0
pure-sasl	0.6.2
py4j	0.10.9.1
pycparser	2.20
Pygments	2.8.1
pyparsing	2.4.7
pyrsistent	0.17.3

Library	Version
python-dateutil	2.8.1
pytz	2021.1
pyzmq	19.0.2
requests	2.25.1
requests-unixsocket	0.2.0
Send2Trash	1.5.0
six	1.15.0
sniffio	1.2.0
terminado	0.9.2
testpath	0.4.4
thrift	0.11.0
thrift-sasl	0.4.3
tornado	6.1
traitlets	4.3.3
urllib3	1.26.6
wcwidth	0.2.5
webencodings	0.5.1
websocket-client	1.2.1

Table 29: Packages in Python 3.8.6 JupyterLab Runtimes - RAPIDS

Library	Version
python	3.8.6
pip	21.1.3
cuda	11.4.1-1
libcudnn8	8.2.2.26-1
_libgcc_mutex	0.1
_openmp_mutex	4.5
abseil-cpp	20210324.2
aiohttp	3.8.1
aiosignal	1.2.0
anyio	3.3.0
appdirs	1.4.4
argon2-cffi	20.1.0
arrow-cpp	5.0.0
arrow-cpp-proc	3.0.0
async-timeout	4.0.1
async_generator	1.10
attrs	20.3.0
aws-c-auth	0.6.7

Library	Version
aws-c-cal	0.5.12
aws-c-common	0.6.17
aws-c-compression	0.2.14
aws-c-event-stream	0.2.7
aws-c-http	0.6.10
aws-c-io	0.10.13
aws-c-mqtt	0.7.9
aws-c-s3	0.1.27
aws-c-sdkutils	0.1.1
aws-checksums	0.1.12
aws-crt-cpp	0.17.8
aws-sdk-cpp	1.9.145
babel	2.9.1
backcall	0.2.0
backports	1.0
backports.functools_lru_cache	1.6.4
bleach	3.3.1
blosc	1.21.0
bokeh	2.4.0
boost	1.74.0
boost-cpp	1.74.0
brotli	1.0.9
brotli-bin	1.0.9
brotlipy	0.7.0
brunsli	0.1
bzip2	1.0.8
c-ares	1.18.1
c-blosc2	2.0.4
ca-certificates	2021.10.8
cachetools	4.2.4
cairo	1.16.0
cdsw	1.1.0
certifi	2020.11.8
cffi	1.14.4
cfitsio	3.470
chardet	4.0.0
charls	2.2.0
charset-normalizer	2.0.6
click	8.0.3

Library	Version
click-plugins	1.1.1
cligj	0.7.2
cloudpickle	2.0.0
colorama	0.4.4
colorcet	3.0.0
cryptography	36.0.1
cucim	21.12.00
cuda-toolkit	11.0.221
cudf	21.12.02
cudf_kafka	21.12.02
cudnn	8.2.1.32
cugraph	21.12.00
cuml	21.12.00
cupy	9.6.0
curl	7.80.0
cusignal	21.12.00
cuspatial	21.12.00
custreamz	21.12.02
cuxfilter	21.12.00
cycler	0.11.0
cyrus-sasl	2.1.27
cytoolz	0.11.2
dask	2021.11.2
dask-core	2021.11.2
dask-cuda	21.12.00
dask-cudf	21.12.02
datashader	0.11.1
datashape	0.5.4
debugpy	1.5.1
decorator	4.4.2
defusedxml	0.6.0
distributed	2021.11.2
dlpack	0.5
entrypoints	0.3
expat	2.4.1
faiss-proc	1.0.0
fastavro	1.4.7
fastrlock	0.8
fiona	1.8.20

Library	Version
font-ttf-dejavu-sans-mono	2.37
font-ttf-inconsolata	3.000
font-ttf-source-code-pro	2.038
font-ttf-ubuntu	0.83
fontconfig	2.13.1
fonts-conda-ecosystem	1
fonts-conda-forge	1
fonttools	4.28.4
freetype	2.10.4
freexl	1.0.6
frozenlist	1.2.0
fsspec	2021.11.1
gdal	3.3.2
geopandas	0.9.0
geopandas-base	0.9.0
geos	3.9.1
geotiff	1.7.0
gettext	0.19.8.1
gflags	2.2.2
giflib	5.2.1
git	2.34.1
glog	0.5.0
gpuci-tools	0.3.1
grpc-cpp	1.41.1
hdf4	4.2.15
hdf5	1.12.1
heapdict	1.0.1
icu	68.2
idna	2.10
imagecodecs	2021.8.26
imageio	2.13.3
importlib-metadata	4.8.3
importlib_metadata	4.8.3
importlib_resources	5.4.0
ipykernel	5.3.4
ipython	7.16.1
ipython_genutils	0.2.0
ipywidgets	7.6.5
jbig	2.1

Library	Version
jedi	0.17.2
jinja2	2.11.3
joblib	1.1.0
jpeg	9d
json-c	0.15
json5	0.9.5
jsonschema	3.2.0
jupyter-client	6.1.7
jupyter-core	4.6.3
jupyter-server	1.10.2
jupyter-server-proxy	3.2.0
jupyterlab	3.2.8
jupyterlab-server	2.7.2
jupyterlab_pygments	0.1.2
jupyterlab_widgets	1.0.2
jxrlib	1.1
kealib	1.4.14
kiwisolver	1.3.2
krb5	1.19.2
lcms2	2.12
ld_impl_linux-64	2.36.1
lerc	3.0
libaec	1.0.6
libblas	3.9.0
libbrotlicommon	1.0.9
libbrotlidec	1.0.9
libbrotlienc	1.0.9
libcblas	3.9.0
libcucim	21.12.00
libcudf	21.12.02
libcudf_kafka	21.12.02
libcugraph	21.12.00
libcuml	21.12.00
libcumlprims	21.12.00
libcurl	7.80.0
libcusolver	11.3.2.107
libcuspatial	21.12.00
libdap4	3.20.6
libdeflate	1.8

Library	Version
libedit	3.1.20191231
libev	4.33
libevent	2.1.10
libfaiss	1.7.0
libffi	3.4.2
libgcc-ng	9.4.0
libgcrypt	1.9.4
libgdal	3.3.2
libgfortran-ng	11.2.0
libgfortran5	11.2.0
libglib	2.70.2
libgpg-error	1.42
libgsasl	1.10.0
libhwloc	2.3.0
libiconv	1.16
libkml	1.3.0
liblapack	3.9.0
libllvm11	11.1.0
libnetcdf	4.8.1
libnghttp2	1.43.0
libnsl	2.0.0
libntlm	1.4
libopenblas	0.3.18
libpng	1.6.37
libpq	13.5
libprotobuf	3.18.1
librdkafka	1.6.1
librmm	21.12.00
librttopo	1.1.0
libsodium	1.0.18
libspatialindex	1.9.3
libspatialite	5.0.1
libssh2	1.10.0
libstdcxx-ng	9.4.0
libthrift	0.15.0
libtiff	4.3.0
libtiff8proc	2.7.0
libuuid	2.32.1
libuv	1.42.0

Library	Version
libwebp	1.2.1
libwebp-base	1.2.1
libxcb	1.13
libxgboost	1.5.0dev.rapidsai21.12
libxml2	2.9.12
libzip	1.8.0
libzlib	1.2.11
libzopfli	1.0.3
llvm-openmp	12.0.1
llvmlite	0.37.0
loket	0.2.0
lz4-c	1.9.3
mapclassify	2.4.3
markdown	3.3.6
markupsafe	1.1.1
matplotlib-base	3.5.1
matplotlib-inline	0.1.3
mistune	0.8.4
msgpack-python	1.0.3
multidict	5.2.0
multipledispatch	0.6.0
munch	2.5.0
munkres	1.1.4
nbclassic	0.3.1
nbclient	0.5.1
nbconvert	6.0.7
nbformat	5.1.3
nccl	2.11.4.1
ncurses	6.2
nest-asyncio	1.5.1
networkx	2.6.3
nodejs	14.17.4
notebook	6.4.3
nspr	4.32
nss	3.73
numba	0.54.1
numpy	1.20.3
nvtx	0.2.3
olefile	0.46

Library	Version
openjpeg	2.4.0
openssl	1.1.1i
orc	1.7.1
packaging	20.9
pandas	1.3.5
pandoc	2.16.2
pandocfilters	1.4.3
panel	0.12.4
param	1.12.0
parquet-cpp	1.5.1
parso	0.7.1
partd	1.2.0
pcre	8.45
pcre2	10.37
perl	5.32.1
pexpect	4.8.0
pickleshare	0.7.5
pillow	8.4.0
pip	21.3.1
pixman	0.40.0
pooch	1.5.2
poppler	21.09.0
poppler-data	0.4.11
postgresql	13.5
proj	8.1.0
prometheus-client	0.9.0
prompt-toolkit	3.0.8
protobuf	3.18.1
psutil	5.8.0
pthread-stubs	0.4
ptxcompiler	0.2.0
ptyprocess	0.6.0
py-xgboost	1.5.0dev.rapidsai21.12
py4j	0.10.9
pyarrow	5.0.0
pycparser	2.20
pyct	0.4.6
pyct-core	0.4.6
pydeck	0.5.0

Library	Version
pyee	8.1.0
pygments	2.8.1
pynvml	11.4.1
pyopenssl	21.0.0
pyparsing	2.4.7
pypeteer	0.2.6
pyproj	3.1.0
pyrsistent	0.17.3
pysocks	1.7.1
python	3.8.12
python-confluent-kafka	1.6.0
python-dateutil	2.8.1
python_abi	3.8
pytz	2021.1
pyviz_comms	2.1.0
pywavelets	1.2.0
pyyaml	6.0
pyzmq	19.0.2
rapids	21.12.00
rapids-xgboost	21.12.00
re2	2021.11.01
readline	8.1
requests	2.25.1
requests-unixsocket	0.2.0
rmm	21.12.00
rtree	0.9.7
s2n	1.3.0
scikit-image	0.18.1
scikit-learn	1.0.1
scipy	1.7.3
send2trash	1.5.0
setuptools	59.6.0
shapely	1.8.0
simpervisor	0.4
six	1.15.0
snappy	1.1.8
sniffio	1.2.0
sortedcontainers	2.4.0
spdlog	1.8.5

Library	Version
sqlite	3.37.0
streamz	0.6.3
tblib	1.7.0
terminado	0.9.2
testpath	0.4.4
threadpoolctl	3.0.0
tifffile	2021.11.2
tiledb	2.3.4
tk	8.6.11
toolz	0.11.2
tornado	6.1
tqdm	4.62.3
traitlets	4.3.3
treelite	2.1.0
treelite-runtime	2.1.0
typing-extensions	4.0.1
typing_extensions	4.0.1
tzcode	2021e
tzdata	2021e
ucx	1.11.2+gef2bbcf
ucx-proc	1.0.0
ucx-py	0.23.0
unicodedata2	13.0.0.post2
urllib3	1.26.6
wcwidth	0.2.5
webencodings	0.5.1
websocket-client	1.2.1
websockets	9.1
wheel	0.37.0
widetsnbextension	3.5.2
xarray	0.20.2
xerces-c	3.2.3
xgboost	1.5.0dev.rapidsai21.12
xorg-kbproto	1.0.7
xorg-libice	1.0.10
xorg-libsm	1.2.3
xorg-libx11	1.7.2
xorg-libxau	1.0.9
xorg-libxdmcp	1.1.3

Library	Version
xorg-libxext	1.3.4
xorg-libxrender	0.9.10
xorg-renderproto	0.11.1
xorg-xextproto	7.3.0
xorg-xproto	7.0.31
xz	5.2.5
yaml	0.2.5
yaml	1.7.2
zeromq	4.3.4
zfp	0.5.5
zict	2.0.0
zipp	3.6.0
zlib	1.2.11
zstd	1.5.0

Python 3.7 Libraries for JupyterLab

This section lists the packages in Python 3.7 JupyterLab Runtimes that ship with ML Runtimes 2021.12.

Table 30: Packages in Python 3.7.11 JupyterLab Runtimes - Standard

Library	Version
python	3.7.11
pip	21.1.3
anyio	3.3.0
argon2-cffi	20.1.0
async-generator	1.10
attrs	20.3.0
Babel	2.9.1
backcall	0.2.0
bitarray	2.1.0
bleach	3.3.1
certifi	2020.11.8
cffi	1.14.4
chardet	4.0.0
charset-normalizer	2.0.6
cycler	0.10.0
decorator	4.4.2
defusedxml	0.6.0
entrypoints	0.3
idna	2.10

Library	Version
importlib-metadata	3.4.0
impyla	0.17.0
ipykernel	5.3.4
ipython	7.16.1
ipython-genutils	0.2.0
jedi	0.17.2
Jinja2	2.11.3
json5	0.9.5
jsonschema	3.2.0
jupyter-client	6.1.7
jupyter-core	4.6.3
jupyter-server	1.10.2
jupyterlab	3.2.8
jupyterlab-pygments	0.1.2
jupyterlab-server	2.7.2
kerberos	1.3.1
kiwisolver	1.3.1
MarkupSafe	1.1.1
matplotlib	3.3.4
mistune	0.8.4
nbclassic	0.3.1
nbclient	0.5.1
nbconvert	6.0.7
nbformat	5.1.3
nest-asyncio	1.5.1
notebook	6.4.3
numpy	1.19.4
packaging	20.9
pandocfilters	1.4.3
parso	0.7.1
pexpect	4.8.0
pickleshare	0.7.5
Pillow	8.4.0
prometheus-client	0.9.0
prompt-toolkit	3.0.8
ptyprocess	0.6.0
pure-sasl	0.6.2
py4j	0.10.9.1
pycparsr	2.20

Library	Version
Pygments	2.8.1
pyparsing	2.4.7
pyrsistent	0.17.3
python-dateutil	2.8.1
pytz	2021.1
pyzmq	19.0.2
requests	2.25.1
requests-unixsocket	0.2.0
Send2Trash	1.5.0
six	1.15.0
sniffio	1.2.0
terminado	0.9.2
testpath	0.4.4
thrift	0.11.0
thrift-sasl	0.4.3
tornado	6.1
traitlets	4.3.3
typing-extensions	3.7.4.3
urllib3	1.26.6
wcwidth	0.2.5
webencodings	0.5.1
websocket-client	1.2.1
zipp	3.4.0

Table 31: Packages in Python 3.7.11 JupyterLab Runtimes - Nvidia GPU Edition

Library	Version
python	3.7.11
pip	21.1.3
cuda	11.4.1-1
libcudnn8	8.2.2.26-1
anyio	3.3.0
argon2-cffi	20.1.0
async-generator	1.10
attrs	20.3.0
Babel	2.9.1
backcall	0.2.0
bitarray	2.1.0
bleach	3.3.1
certifi	2020.11.8

Library	Version
cff	1.14.4
chardet	4.0.0
charset-normalizer	2.0.6
cycler	0.10.0
decorator	4.4.2
defusedxml	0.6.0
entrypoints	0.3
idna	2.10
importlib-metadata	3.4.0
impyla	0.17.0
ipykernel	5.3.4
ipython	7.16.1
ipython-genutils	0.2.0
jedi	0.17.2
Jinja2	2.11.3
json5	0.9.5
jsonschema	3.2.0
jupyter-client	6.1.7
jupyter-core	4.6.3
jupyter-server	1.10.2
jupyterlab	3.2.8
jupyterlab-pygments	0.1.2
jupyterlab-server	2.7.2
kerberos	1.3.1
kiwisolver	1.3.1
MarkupSafe	1.1.1
matplotlib	3.3.4
mistune	0.8.4
nbclassic	0.3.1
nbclient	0.5.1
nbconvert	6.0.7
nbformat	5.1.3
nest-asyncio	1.5.1
notebook	6.4.3
numpy	1.19.4
packaging	20.9
pandocfilters	1.4.3
parso	0.7.1
pexpect	4.8.0

Library	Version
pickleshare	0.7.5
Pillow	8.4.0
prometheus-client	0.9.0
prompt-toolkit	3.0.8
ptyprocess	0.6.0
pure-sasl	0.6.2
py4j	0.10.9.1
pycparser	2.20
Pygments	2.8.1
pyparsing	2.4.7
pyrsistent	0.17.3
python-dateutil	2.8.1
pytz	2021.1
pyzmq	19.0.2
requests	2.25.1
requests-unixsocket	0.2.0
Send2Trash	1.5.0
six	1.15.0
sniffio	1.2.0
terminado	0.9.2
testpath	0.4.4
thrift	0.11.0
thrift-sasl	0.4.3
tornado	6.1
traitlets	4.3.3
typing-extensions	3.7.4.3
urllib3	1.26.6
wcwidth	0.2.5
webencodings	0.5.1
websocket-client	1.2.1
zipp	3.4.0

Table 32: Packages in Python 3.7.11 JupyterLab Runtimes - RAPIDS

Library	Version
python	3.7.11
pip	21.1.3
_libgcc_mutex	0.1
_openmp_mutex	4.5
abseil-cpp	20210324.2

Library	Version
aiohttp	3.8.1
aiosignal	1.2.0
anyio	3.3.0
appdirs	1.4.4
argcomplete	1.12.3
argon2-cffi	20.1.0
arrow-cpp	5.0.0
arrow-cpp-proc	3.0.0
async-timeout	4.0.1
async_generator	1.10
asynctest	0.13.0
attrs	20.3.0
aws-c-auth	0.6.7
aws-c-cal	0.5.12
aws-c-common	0.6.17
aws-c-compression	0.2.14
aws-c-event-stream	0.2.7
aws-c-http	0.6.10
aws-c-io	0.10.13
aws-c-mqtt	0.7.9
aws-c-s3	0.1.27
aws-c-sdkutils	0.1.1
aws-checksums	0.1.12
aws-crt-cpp	0.17.8
aws-sdk-cpp	1.9.145
babel	2.9.1
backcall	0.2.0
backports	1.0
backports.functools_lru_cache	1.6.4
bleach	3.3.1
blosc	1.21.0
bokeh	2.4.0
boost	1.74.0
boost-cpp	1.74.0
brotli	1.0.9
brotli-bin	1.0.9
brotlipy	0.7.0
brunsli	0.1
bzip2	1.0.8

Library	Version
c-ares	1.18.1
c-blosc2	2.0.4
ca-certificates	2021.10.8
cachetools	4.2.4
cairo	1.16.0
cdsw	1.1.0
certifi	2020.11.8
cffi	1.14.4
cfitsio	3.470
chardet	4.0.0
charls	2.2.0
charset-normalizer	2.0.6
click	8.0.3
click-plugins	1.1.1
cligj	0.7.2
cloudpickle	2.0.0
colorama	0.4.4
colorcet	3.0.0
cryptography	36.0.1
cucim	21.12.00
cuda-toolkit	11.0.221
cudf	21.12.02
cudf_kafka	21.12.02
cudnn	8.2.1.32
cugraph	21.12.00
cuml	21.12.00
cupy	9.6.0
curl	7.80.0
cusignal	21.12.00
cuspatial	21.12.00
custreamz	21.12.02
cuxfilter	21.12.00
cycler	0.11.0
cyrus-sasl	2.1.27
cytoolz	0.11.2
dask	2021.11.2
dask-core	2021.11.2
dask-cuda	21.12.00
dask-cudf	21.12.02

Library	Version
datashader	0.11.1
datashape	0.5.4
debugpy	1.5.1
decorator	4.4.2
defusedxml	0.6.0
distributed	2021.11.2
dlpack	0.5
entrypoints	0.3
expat	2.4.1
faiss-proc	1.0.0
fastavro	1.4.7
fastrlock	0.8
fiona	1.8.20
font-ttf-dejavu-sans-mono	2.37
font-ttf-inconsolata	3.000
font-ttf-source-code-pro	2.038
font-ttf-ubuntu	0.83
fontconfig	2.13.1
fonts-conda-ecosystem	1
fonts-conda-forge	1
fonttools	4.28.4
freetype	2.10.4
freexl	1.0.6
frozenlist	1.2.0
fsspec	2021.11.1
gdal	3.3.2
geopandas	0.9.0
geopandas-base	0.9.0
geos	3.9.1
geotiff	1.7.0
gettext	0.19.8.1
gflags	2.2.2
giflib	5.2.1
git	2.34.1
glog	0.5.0
gpuci-tools	0.3.1
grpc-cpp	1.41.1
hdf4	4.2.15
hdf5	1.12.1

Library	Version
heapdict	1.0.1
icu	68.2
idna	2.10
imagecodecs	2021.8.26
imageio	2.13.3
importlib-metadata	3.4.0
importlib_metadata	4.8.3
importlib_resources	5.4.0
ipykernel	5.3.4
ipython	7.16.1
ipython_genutils	0.2.0
ipywidgets	7.6.5
jbig	2.1
jedi	0.17.2
jinja2	2.11.3
joblib	1.1.0
jpeg	9d
json-c	0.15
json5	0.9.5
jsonschema	3.2.0
jupyter-client	6.1.7
jupyter-core	4.6.3
jupyter-server	1.10.2
jupyter-server-proxy	3.2.0
jupyterlab	3.2.8
jupyterlab-server	2.7.2
jupyterlab_pygments	0.1.2
jupyterlab_widgets	1.0.2
jxrlib	1.1
kealib	1.4.14
kiwisolver	1.3.2
krb5	1.19.2
lcms2	2.12
ld_impl_linux-64	2.36.1
lerc	3.0
libaec	1.0.6
libblas	3.9.0
libbrotlicommon	1.0.9
libbrotlidec	1.0.9

Library	Version
libbrotlienc	1.0.9
libblas	3.9.0
libcucim	21.12.00
libcudf	21.12.02
libcudf_kafka	21.12.02
libcugraph	21.12.00
libcuml	21.12.00
libcumlprims	21.12.00
libcurl	7.80.0
libcusolver	11.3.2.107
libcuspatial	21.12.00
libdap4	3.20.6
libdeflate	1.8
libedit	3.1.20191231
libev	4.33
libevent	2.1.10
libfaiss	1.7.0
libffi	3.4.2
libgcc-ng	9.4.0
libgcrypt	1.9.4
libgdal	3.3.2
libgfortran-ng	11.2.0
libgfortran5	11.2.0
libglib	2.70.2
libgpg-error	1.42
libgsasl	1.10.0
libhwloc	2.3.0
libiconv	1.16
libkml	1.3.0
liblapack	3.9.0
libllvm11	11.1.0
libnetcdf	4.8.1
libnghttp2	1.43.0
libns1	2.0.0
libntlm	1.4
libopenblas	0.3.18
libpng	1.6.37
libpq	13.5
libprotobuf	3.18.1

Library	Version
librdkafka	1.6.1
librmm	21.12.00
librttopo	1.1.0
libsodium	1.0.18
libspatialindex	1.9.3
libspatialite	5.0.1
libssh2	1.10.0
libstdcxx-ng	9.4.0
libthrift	0.15.0
libtiff	4.3.0
libutf8proc	2.7.0
libuuid	2.32.1
libuv	1.42.0
libwebp	1.2.1
libwebp-base	1.2.1
libxcb	1.13
libxgboost	1.5.0dev.rapidsai21.12
libxml2	2.9.12
libzip	1.8.0
libzlib	1.2.11
libzopfli	1.0.3
llvm-openmp	12.0.1
llvmlite	0.37.0
loket	0.2.0
lz4-c	1.9.3
mapclassify	2.4.3
markdown	3.3.6
markupsafe	1.1.1
matplotlib-base	3.5.1
matplotlib-inline	0.1.3
mistune	0.8.4
msgpack-python	1.0.3
multidict	5.2.0
multipledispatch	0.6.0
munch	2.5.0
munkres	1.1.4
nbclassic	0.3.1
nbclient	0.5.1
nbconvert	6.0.7

Library	Version
nbformat	5.1.3
nccl	2.11.4.1
ncurses	6.2
nest-asyncio	1.5.1
networkx	2.6.3
nodejs	14.17.4
notebook	6.4.3
nspr	4.32
nss	3.73
numba	0.54.1
numpy	1.20.3
nvtx	0.2.3
olefile	0.46
openjpeg	2.4.0
openssl	1.1.1i
orc	1.7.1
packaging	20.9
pandas	1.3.5
pandoc	2.16.2
pandocfilters	1.4.3
panel	0.12.4
param	1.12.0
parquet-cpp	1.5.1
parso	0.7.1
partd	1.2.0
pcre	8.45
pcre2	10.37
perl	5.32.1
pexpect	4.8.0
pickle5	0.0.12
pickleshare	0.7.5
pillow	8.4.0
pip	21.3.1
pixman	0.40.0
pooch	1.5.2
poppler	21.09.0
poppler-data	0.4.11
postgresql	13.5
proj	8.1.0

Library	Version
prometheus-client	0.9.0
prompt-toolkit	3.0.8
protobuf	3.18.1
psutil	5.8.0
pthread-stubs	0.4
ptxcompiler	0.2.0
ptyprocess	0.6.0
py-xgboost	1.5.0dev.rapidsai21.12
py4j	0.10.9
pyarrow	5.0.0
pycparser	2.20
pyct	0.4.6
pyct-core	0.4.6
pydeck	0.5.0
pyee	8.1.0
pygments	2.8.1
pynvml	11.4.1
pyopenssl	21.0.0
yparsing	2.4.7
pypeteer	0.2.6
pyproj	3.1.0
pyrsistent	0.17.3
pysocks	1.7.1
python	3.7.12
python-confluent-kafka	1.6.0
python-dateutil	2.8.1
python_abi	3.7
pytz	2021.1
pyviz_comms	2.1.0
pywavelets	1.2.0
pyyaml	6.0
pyzmq	19.0.2
rapids	21.12.00
rapids-xgboost	21.12.00
re2	2021.11.01
readline	8.1
requests	2.25.1
requests-unixsocket	0.2.0
rmm	21.12.00

Library	Version
rtree	0.9.7
s2n	1.3.0
scikit-image	0.18.1
scikit-learn	1.0.1
scipy	1.7.3
send2trash	1.5.0
setuptools	59.6.0
shapely	1.8.0
simpervisor	0.4
six	1.15.0
snappy	1.1.8
sniffio	1.2.0
sortedcontainers	2.4.0
spdlog	1.8.5
sqlite	3.37.0
streamz	0.6.3
tblib	1.7.0
terminado	0.9.2
testpath	0.4.4
threadpoolctl	3.0.0
tiffio	2021.11.2
tiledb	2.3.4
tk	8.6.11
toolz	0.11.2
tornado	6.1
tqdm	4.62.3
traitlets	4.3.3
treelite	2.1.0
treelite-runtime	2.1.0
typing-extensions	3.7.4.3
tzcode	2021e
tzdata	2021e
ucx	1.11.2+gef2bbcf
ucx-proc	1.0.0
ucx-py	0.23.0
unicodedata2	13.0.0.post2
urllib3	1.26.6
wcwidth	0.2.5
webencodings	0.5.1

Library	Version
websocket-client	1.2.1
websockets	9.1
wheel	0.37.0
widetsnbextension	3.5.2
xarray	0.20.2
xerces-c	3.2.3
xgboost	1.5.0dev.rapidsai21.12
xorg-kbproto	1.0.7
xorg-libice	1.0.10
xorg-libsm	1.2.3
xorg-libx11	1.7.2
xorg-libxau	1.0.9
xorg-libxdmcp	1.1.3
xorg-libxext	1.3.4
xorg-libxrender	0.9.10
xorg-renderproto	0.11.1
xorg-xextproto	7.3.0
xorg-xproto	7.0.31
xz	5.2.5
yaml	0.2.5
yaml	1.7.2
zeromq	4.3.4
zfp	0.5.5
zict	2.0.0
zipp	3.4.0
zlib	1.2.11
zstd	1.5.0

R 4.0 Libraries

This section lists the R 4.0 libraries that ship with ML Runtimes 2021.12.

Table 33: R 4.0.5 Libraries for Workbench

Library	Version
askpass	1.1
base	4.0.5
bitops	1.0-7
boot	1.3-27
brew	1.0-6
Cairo	1.2-0

Library	Version
caTools	1.18.2
cdsw	2.1
class	7.3-18
cli	3.0.1
cluster	2.1.1
codetools	0.2-18
colorspace	2.0-2
compiler	4.0.5
crayon	1.4.1
curl	4.3.2
datasets	4.0.5
digest	0.6.27
ellipsis	0.3.2
fansi	0.5.0
farver	2.1.0
foreign	0.8-81
ggplot2	3.3.5
glue	1.4.2
graphics	4.0.5
grDevices	4.0.5
grid	4.0.5
gtable	0.3.0
httr	1.4.2
jsonlite	1.7.2
KernSmooth	2.23-18
labeling	0.4.2
lattice	0.20-41
lifecycle	1.0.0
magrittr	2.0.1
MASS	7.3-53.1
Matrix	1.3-2
methods	4.0.5
mgcv	1.8-34
mime	0.11
munsell	0.5.0
nlme	3.1-152
nnet	7.3-15
openssl	1.4.4
parallel	4.0.5

Library	Version
pillar	1.6.2
pkgconfig	2.0.3
png	0.1-7
R6	2.5.1
RColorBrewer	1.1-2
RJSONIO	1.3-1.5
rlang	0.4.11
Rook	1.1-1
rpart	4.1-15
Rserve	1.7-0
scales	1.1.1
spatial	7.3-13
splines	4.0.5
stats	4.0.5
stats4	4.0.5
survival	3.2-10
sys	3.4
tcltk	4.0.5
tibble	3.1.4
tools	4.0.5
utf8	1.2.2
utils	4.0.5
vctrs	0.3.8
viridisLite	0.4.0
withr	2.4.2

R 4.1 Libraries

This section lists the R 4.1 libraries that ship with ML Runtimes 2021.12.

Table 34: R 4.0.5 Libraries for Workbench

Library	Version
askpass	1.1
base	4.1.1
bitops	1.0-7
boot	1.3-28
brew	1.0-6
Cairo	1.2-0
caTools	1.18.2
cdsw	2.1

Library	Version
class	7.3-19
cli	3.0.1
cluster	2.1.2
codetools	0.2-18
colorspace	2.0-2
compiler	4.1.1
crayon	1.3.4
curl	4.3.2
datasets	4.1.1
digest	0.6.27
ellipsis	0.3.2
fansi	0.5.0
farver	2.1.0
foreign	0.8-81
ggplot2	3.3.5
glue	1.4.2
graphics	4.1.1
grDevices	4.1.1
grid	4.1.1
gtable	0.3.0
httr	1.4.2
jsonlite	1.7.2
KernSmooth	2.23-20
labeling	0.4.2
lattice	0.20-44
lifecycle	1.0.0
magrittr	2.0.1
MASS	7.3-54
Matrix	1.3-4
methods	4.1.1
mgcv	1.8-36
mime	0.11
munsell	0.5.0
nlme	3.1-152
nnet	7.3-16
openssl	1.4.4
parallel	4.1.1
pillar	1.6.2
pkgconfig	2.0.3

Library	Version
png	0.1-7
R6	2.5.1
RColorBrewer	1.1-2
RJSONIO	1.3-1.5
rlang	0.4.11
Rook	1.1-1
rpart	4.1-15
Rserve	1.7-0
scales	1.1.1
spatial	7.3-14
splines	4.1.1
stats	4.1.1
stats4	4.1.1
survival	3.2-11
sys	3.4
tcltk	4.1.1
tibble	3.1.4
tools	4.1.1
utf8	1.2.2
utils	4.1.1
vctrs	0.3.8
viridisLite	0.4.0
withr	2.4.2

R 3.6 Libraries

This section lists the R 3.6 libraries that ship with ML Runtimes 2021.12.

Table 35: R 3.6.3 Libraries for Workbench

Library	Version
askpass	1.1
base	3.6.3
bitops	1.0-7
boot	1.3-24
brew	1.0-6
Cairo	1.2-0
caTools	1.18.2
cdsw	2.1
class	7.3-15
cli	3.0.1

Library	Version
cluster	2.1.0
codetools	0.2-16
colorspace	2.0-2
compiler	3.6.3
crayon	1.4.4
curl	4.3.2
datasets	3.6.3
digest	0.6.27
ellipsis	0.3.2
fansi	0.5.0
farver	2.1.0
foreign	0.8-75
ggplot2	3.3.5
glue	1.4.2
graphics	3.6.3
grDevices	3.6.3
grid	3.6.3
gtable	0.3.0
httr	1.4.2
jsonlite	1.7.2
KernSmooth	2.23-16
labeling	0.4.2
lattice	0.20-38
lifecycle	0.1.0
magrittr	2.0.1
MASS	7.3-51.5
Matrix	1.2-18
methods	3.6.3
mgcv	1.8-31
mime	0.11
munsell	0.5.0
nlme	3.4-144
nnet	7.3-12
openssl	1.4.4
parallel	3.6.3
pillar	1.6.2
pkgconfig	2.0.3
png	0.1-7
R6	2.5.1

Library	Version
RColorBrewer	1.1-2
RJSONIO	1.3-1.5
rlang	0.4.11
Rook	1.1-1
rpart	4.1-15
Rserve	1.7-0
scales	1.1.1
spatial	7.3-11
splines	3.6.3
stats	3.6.3
stats4	3.6.3
survival	3.1-8
sys	3.4
tcltk	3.6.3
tibble	3.1.4
tools	3.6.3
utf8	1.2.2
utils	3.6.3
vctrs	0.3.8
viridisLite	0.4.0
withr	2.4.2

ML Runtimes 2020.11

This section lists the Python and R libraries that ship with ML Runtimes 2020.11.

All ML Runtimes 2020.11 contain NumPy 1.19.2 and Matplotlib 3.1.2.

- Matplotlib - 3.1.2
- NumPy - 1.19.2 and the Python versions, which are 3.6.10, 3.7.9, and 3.8.3