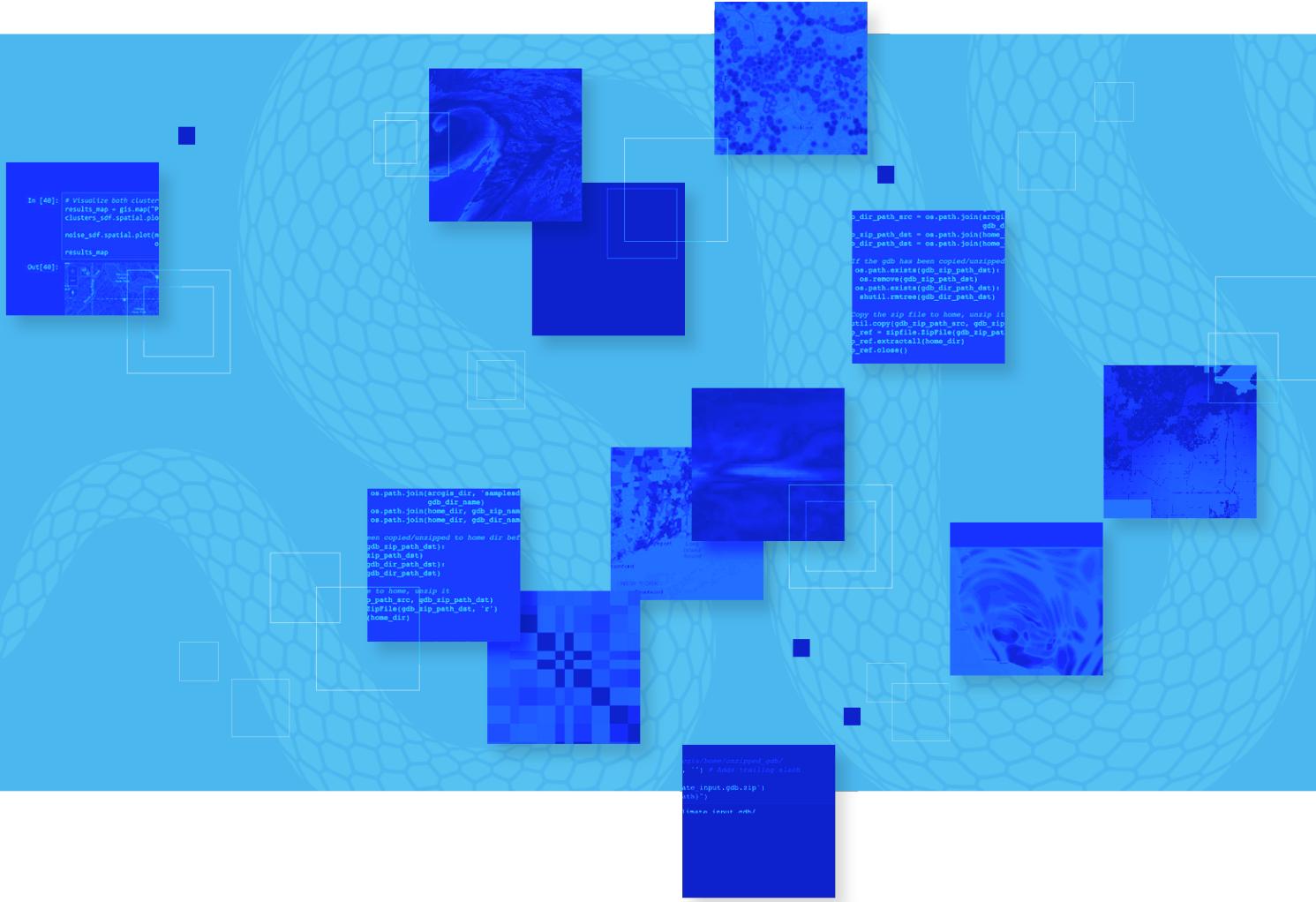




# THE SCIENCE OF WHERE®



# 4.0 ArcGIS® Notebooks

## Python Libraries Manifest

ArcGIS® Notebooks provides a spatially optimized Jupyter experience to create, share, and run data science, data management, and administrative scripts.

With ArcGIS Notebooks, you can perform analysis, automate workflows, and immediately visualize data and analysis results in a geographic context. It is an efficient, modern environment that combines code, real-time visualizations and maps, and data tools.

ArcGIS Notebooks features the ArcGIS Python libraries, ArcGIS API for Python, and ArcPy.

ArcGIS Notebooks also includes access to hundreds of open-source Python libraries and packages.

This publication provides a complete list of the Python libraries—including their versions—that are packaged in the ArcGIS Notebooks for runtime version 4.0.

# ArcGIS Notebooks Runtime

## Python 3 Standard Version 4.0

### RELEASED

June 2020

### TOTAL PACKAGES

325

### SUPPORTED IN

ArcGIS Enterprise 10.8.1 and ArcGIS Online (June 2020)

With ArcGIS Enterprise you can customize your notebook environment. Learn more at the [ArcGIS Notebook Server website](#).

Library Name	Version	Library Name	Version	Library Name	Version
_libgcc_mutex	0.1	dask-glm	0.2.0	jasper	2.0.14
_tflow_select	2.3.0	dask-ml	1.2.0	jedi	0.17.0
absl-py	0.9.0	dataclasses	0.7	jeepney	0.4.3
affine	2.3.0	decorator	4.4.2	jinja2	2.11.2
ansiwrap	0.8.4	defusedxml	0.6.0	jmespath	0.9.4
arcgis	1.8.1	dill	0.3.1.1	joblib	0.14.1
arviz	0.6.1	distributed	2.16.0	jpeg	9b
asn1crypto	1.3.0	docutils	0.15.2	json-c	0.13.1
astor	0.8.0	entrypoints	0.3	jsonschema	3.2.0
attrs	19.3.0	expat	2.2.6	jupyter_client	6.1.3
backcall	0.1.0	fastai	1.0.60	jupyter_contrib_core	0.3.3
backports	1	fastcache	1.1.0	jupyter_contrib_nbextensions	0.5.1
backports.tempfile	1	fastprogress	0.2.2	jupyter_core	4.6.3
backports.weakref	1.0.post1	ffmpeg	4	jupyter_highlight_selected_word	0.2.0
beautifulsoup4	4.8.2	fiona	1.7.12	jupyter_latex_envs	1.4.4
binutils_impl_linux-64	2.33.1	fontconfig	2.13.0	jupyter_nbextensions_configurator	0.4.1
binutils_linux-64	2.33.1	freelut	3.0.0	kealib	1.4.7
blas	1	freetype	2.9.1	keras-applications	1.0.8
bleach	3.1.4	freexl	1.0.5	keras-preprocessing	1.1.0
blinker	1.4	fsspec	0.7.1	keyring	21.1.1
blosc	1.15.0	future	0.18.2	kiwisolver	1.2.0
bokeh	1.4.0	gast	0.2.2	krb5	1.16.4
boto3	1.12.39	gcc_impl_linux-64	7.3.0	ld_impl_linux-64	2.33.1
botocore	1.15.39	gcc_linux-64	7.3.0	lerc	0.1.0
bottleneck	1.3.2	gdal	2.2.4	libboost	1.67.0
bzip2	1.0.8	geos	3.6.2	libcurl	7.67.0
c-ares	1.15.0	giflib	5.1.4	libdap4	3.19.1
ca-certificates	2020.1.1	glib	2.63.1	libedit	3.1.20181209
cachetools	3.1.1	gmp	6.1.2	libffi	3.2.1
cairo	1.14.12	gmpy2	2.0.8	libgcc-ng	9.1.0
certifi	2020.4.5.1	google-auth	1.14.1	libgdal	2.2.4
cffi	1.14.0	google-auth-oauthlib	0.4.1	libfortran-ng	7.3.0
cftime	1.1.2	google-pasta	0.2.0	libglu	9.0.0
chardet	3.0.4	graphite2	1.3.13	libgpuarray	0.7.6
chart-studio	1.1.0	grpcio	1.27.2	libkml	1.3.0
click	7.1.2	gxx_impl_linux-64	7.3.0	libnetcdf	4.6.1
click-plugins	1.1.1	gxx_linux-64	7.3.0	libopencv	3.4.2
cligj	0.5.0	h5py	2.8.0	libopus	1.3.1
cloudpickle	1.3.0	harfbuzz	1.8.8	libpng	1.6.37
colorlover	0.3.0	hdf4	4.2.13	libpq	11.2
conda	4.6.14	hdf5	1.10.2	libprotobuf	3.11.4
contextvars	2.4	headdict	1.0.1	libsodium	1.0.16
cryptography	2.9.2	holoviews	1.13.2	libspatialindex	1.9.3
cryptography-vectors	2.9.2	html5lib	1.0.1	libspatialite	4.3.0a
cudatoolkit	10.1.243	icu	58.2	libssh2	1.9.0
cufflinks-py	0.17.3	idna	2.9	libstdcxx-ng	9.1.0
curl	7.67.0	imageio	2.8.0	libtiff	4.1.0
cycler	0.10.0	immutables	0.11	libuuid	1.0.3
cymem	2.0.2	importlib_metadata	1.5.0	libvpx	1.7.0
cython	0.29.17	intel-openmp	2019.4	libxcb	1.13
cython-blis	0.2.4	ipykernel	5.1.4	libxml2	2.9.9
cytoolz	0.10.1	ipython	7.13.0	libxslt	1.1.33
dask	2.14.0	ipython_genutils	0.2.0		
dask-core	2.14.0	ipywidgets	7.5.1		

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# ArcGIS Notebooks Runtime

## Python 3 Standard Version 4.0

Library Name	Version	Library Name	Version	Library Name	Version
llvmlite	0.31.0	plac	0.9.6	secretstorage	3.1.0
locket	0.2.0	plotly	4.6.0	send2trash	1.5.0
lxml	4.2.3	preshed	2.0.1	setuptools	46.2.0
mako	1.1.2	proj4	4.9.3	shapely	1.6.4
markdown	3.1.1	prometheus_client	0.7.1	simplejson	3.17.0
markupsafe	1.1.1	prompt_toolkit	3.0.5	six	1.14.0
matplotlib	3.1.3	protobuf	3.11.4	snappy	1.1.7
matplotlib-base	3.1.3	psutil	5.7.0	snuggs	1.4.7
mistune	0.8.4	ptyprocess	0.6.0	sortedcontainers	2.1.0
mkl	2019.4	py-opencv	3.4.2	soupsieve	2
mkl-service	2.3.0	pyasn1	0.4.8	spacy	2.1.8
mkl_fft	1.0.15	pyasn1-modules	0.2.7	sqlalchemy	1.3.16
mkl_random	1.1.0	pycosat	0.6.3	sqlite	3.31.1
mpc	1.1.0	pycparser	2.2	srsly	0.1.0
mpfr	4.0.1	pycrypto	2.6.1	statsmodels	0.11.0
mpmath	1.1.0	pyct	0.4.6	sympy	1.3
msgpack-python	1.0.0	pygments	2.6.1	tblib	1.6.0
multipledispatch	0.6.0	pygpu	0.7.6	tenacity	5.1.1
munch	2.5.0	pyjwt	1.7.1	tensorboard	2.1.0
murmurhash	1.0.2	pykerberos	1.1.14	tensorflow	2.1.0
nbconvert	5.6.1	pymc3	3.8	tensorflow-base	2.1.0
nbformat	5.0.6	pyopenssl	19.1.0	tensorflow-estimator	2.1.0
ncurses	6.2	pyparsing	2.4.7	termcolor	1.1.0
netcdf4	1.4.2	pyrsistent	0.16.0	terminado	0.8.3
networkx	2.4	pyshp	2.1.0	testpath	0.4.4
ninja	1.9.0	pysocks	1.7.1	textwrap3	0.9.2
notebook	6.0.3	pytables	3.4.4	theano	1.0.4
ntlm-auth	1.4.0	python	3.6.10	thinc	7.0.8
numba	0.48.0	python-cufflinks	0.17.3	tini	0.18.0
numexpr	2.6.9	python-dateutil	2.8.1	tk	8.6.8
numpy	1.18.1	pytorch	1.4.0	toolz	0.10.0
numpy-base	1.18.1	pytz	2020.1	torchvision	0.5.0
nvidia-ml-py3	7.352.0	pyviz_comms	0.7.4	tornado	6.0.4
oauthlib	3.1.0	pywavelets	1.1.1	tqdm	4.46.0
olefile	0.46	pyyaml	5.3.1	traitlets	4.3.3
opencv	3.4.2	pyzmq	18.1.1	urllib3	1.25.8
openjpeg	2.3.0	rasterio	0.36.0	vincent	0.4.4
openssl	1.1.1g	rasterstats	0.13.0	wasabi	0.2.2
opt_einsum	3.1.0	readline	7	wcwidth	0.1.9
packaging	20.3	requests	2.23.0	webencodings	0.5.1
pandas	1.0.3	requests-kerberos	0.12.0	werkzeug	1.0.1
pandocfilters	1.4.2	requests-oauthlib	1.3.0	wheel	0.34.2
panel	0.8.0	requests-toolbelt	0.9.1	widgetsnbextension	3.5.1
papermill	1.2.1	requests_ntlm	1.1.0	wrapt	1.12.1
param	1.9.3	retrying	1.3.3	xarray	0.15.1
parso	0.7.0	rise	5.6.1	xerces-c	3.2.2
partd	1.1.0	rsa	4	xlrd	1.2.0
patsy	0.5.1	rtree	0.8.3	xz	5.2.5
pcre	8.43	ruamel_yaml	0.15.87	yaml	0.1.7
pexpect	4.8.0	s3transfer	0.3.3	zeromq	4.3.1
pickleshare	0.7.5	scikit-image	0.15.0	zict	2.0.0
pillow	6.2.2	scikit-learn	0.21.3	zipp	3.1.0
pip	20.0.2	scipy	1.4.1	zlib	1.2.11
pixman	0.38.0	seaborn	0.9.0	zstd	1.3.7

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# ArcGIS Notebooks Runtime

## Python 3 Advanced Version 4.0

### RELEASED

June 2020

### TOTAL PACKAGES

327

### SUPPORTED IN

ArcGIS Enterprise 10.8.1 and ArcGIS Online (June 2020)

The use of Advanced and/or Advanced with GPU notebook runtimes consumes credits within ArcGIS Online. See ArcGIS Online [credits by capability](#) for more details.

With ArcGIS Enterprise you can customize your notebook environment. Learn more at the [ArcGIS Notebook Server website](#).

Library Name	Version	Library Name	Version	Library Name	Version
_libgcc_mutex	0.1	dask-glm	0.2.0	jedi	0.17.0
_tflow_select	2.3.0	dask-ml	1.2.0	jeepney	0.4.3
absl-py	0.9.0	dataclasses	0.7	jinja2	2.11.2
affine	2.3.0	decorator	4.4.2	jmespath	0.9.4
ansiwrap	0.8.4	defusedxml	0.6.0	joblib	0.14.1
arcgis	1.8.1	dill	0.3.1.1	jpeg	9b
arcgis-server-py3	10.8.1	distributed	2.16.0	json-c	0.13.1
arviz	0.6.1	docutils	0.15.2	jsonschema	3.2.0
asn1crypto	1.3.0	entrypoints	0.3	jupyter_client	6.1.3
astor	0.8.0	et_xmlfile	1.0.1	jupyter_contrib_core	0.3.3
attrs	19.3.0	expat	2.2.6	jupyter_contrib_nbextensions	0.5.1
backcall	0.1.0	fastai	1.0.60	jupyter_core	4.6.3
backports	1	fastcache	1.1.0	jupyter_highlight_selected_word	0.2.0
backports.tempfile	1	fastprogress	0.2.2	jupyter_latex_envs	1.4.4
backports.weakref	1.0.post1	ffmpeg	4	jupyter_nbextensions_configurator	0.4.1
beautifulsoup4	4.8.2	fontconfig	2.13.0	kealib	1.4.12
binutils_impl_linux-64	2.33.1	freelut	3.0.0	keras-applications	1.0.8
binutils_linux-64	2.33.1	freetype	2.9.1	keras-preprocessing	1.1.0
blas	1	freexl	1.0.5	keyring	21.1.1
bleach	3.1.4	fsspec	0.7.1	kiwisolver	1.2.0
blinker	1.4	future	0.18.2	krb5	1.17.1
blosc	1.15.0	gast	0.2.2	ld_impl_linux-64	2.33.1
bokeh	1.4.0	gcc_impl_linux-64	7.3.0	lerc	0.1.0
boto3	1.12.39	gcc_linux-64	7.3.0	libboost	1.67.0
botocore	1.15.39	geos	3.6.2	libcurl	7.69.1
bottleneck	1.3.2	giflib	5.1.4	libdap4	3.19.1
bzip2	1.0.8	glib	2.63.1	libedit	3.1.20181209
c-ares	1.15.0	gmp	6.1.2	libffi	3.2.1
ca-certificates	2020.1.1	gmpy2	2.0.8	libgcc-ng	9.1.0
cachetools	3.1.1	google-auth	1.14.1	libgdal	2.0.0
cairo	1.14.12	google-auth-oauthlib	0.4.1	libfortran-ng	7.3.0
certifi	2020.4.5.1	google-pasta	0.2.0	libglu	9.0.0
cffi	1.14.0	graphite2	1.3.13	libgpuarray	0.7.6
cftime	1.0.0b1	grpcio	1.27.2	libkml	1.3.0
chardet	3.0.4	gxx_impl_linux-64	7.3.0	libnetcdf	4.7.3
chart-studio	1.1.0	gxx_linux-64	7.3.0	libopus	1.3.1
click	7.1.2	h5py	2.10.0	libpng	1.6.37
click-plugins	1.1.1	harfbuzz	1.8.8	libpq	9.5.4
cligj	0.5.0	hdf4	4.2.13	libprotobuf	3.11.4
cloudpickle	1.3.0	hdf5	1.10.4	libsodium	1.0.16
colorlover	0.3.0	heapdict	1.0.1	libspatialindex	1.9.3
conda	4.6.14	holoviews	1.13.2	libspatiallite	4.3.0a
contextvars	2.4	html5lib	1.0.1	libssh2	1.9.0
cryptography	2.9.2	icu	58.2	libstdcxx-ng	9.1.0
cryptography-vectors	2.9.2	idna	2.9	libtiff	4.1.0
cudatoolkit	10.1.243	imageio	2.8.0	libuuid	1.0.3
cufflinks-py	0.17.3	immutables	0.11	libvpx	1.7.0
curl	7.69.1	importlib_metadata	1.5.0	libxcb	1.13
cycler	0.10.0	intel-openmp	2019.4	libxml2	2.9.9
cymem	2.0.2	ipykernel	5.1.4	libxslt	1.1.33
cython	0.29.17	ipython	7.13.0	llvmlite	0.31.0
cython-blis	0.2.4	ipython_genutils	0.2.0	locket	0.2.0
cytoolz	0.10.1	ipywidgets	7.5.1	lxml	4.2.3
dask	2.14.0	jasper	2.0.14		
dask-core	2.14.0	jdcal	1.4.1		

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# ArcGIS Notebooks Runtime

## Python 3 Advanced Version 4.0

Library Name	Version	Library Name	Version	Library Name	Version
lzo	2.1	preshed	2.0.1	simplejson	3.17.0
mako	1.1.2	proj4	4.9.3	six	1.14.0
markdown	3.1.1	prometheus_client	0.7.1	snappy	1.1.7
markupsafe	1.1.1	prompt_toolkit	3.0.5	snuggs	1.4.7
matplotlib	3.1.3	protobuf	3.11.4	sortedcontainers	2.1.0
matplotlib-base	3.1.3	psutil	5.7.0	soupsieve	2
mistune	0.8.4	ptyprocess	0.6.0	spacy	2.1.8
mkl	2019.4	py	1.8.1	sqlalchemy	1.3.16
mkl-service	2.3.0	pyasn1	0.4.8	sqlite	3.31.1
mkl_fft	1.0.15	pyasn1-modules	0.2.7	srsly	0.1.0
mkl_random	1.1.0	pycosat	0.6.3	statsmodels	0.11.0
mpc	1.1.0	pycparser	2.2	sympy	1.5.1
mpfr	4.0.1	pycrypto	2.6.1	tblib	1.6.0
mpmath	1.1.0	pyct	0.4.6	tenacity	5.1.1
msgpack-python	1.0.0	pygments	2.6.1	tensorboard	2.1.0
multipledispatch	0.6.0	pygpu	0.7.6	tensorflow	2.1.0
munch	2.5.0	pyjwt	1.7.1	tensorflow-base	2.1.0
murmurhash	1.0.2	pykerberos	1.1.14	tensorflow-estimator	2.1.0
nbconvert	5.6.1	pymc3	3.8	termcolor	1.1.0
nbformat	5.0.6	pyopenssl	19.1.0	terminado	0.8.3
ncurses	6.2	pyparsing	2.4.7	testpath	0.4.4
netcdf4	1.5.3	pypdf2	1.26.0	textwrap3	0.9.2
networkx	2.4	pyrsistent	0.16.0	theano	1.0.4
ninja	1.9.0	pyshp	2.1.0	thinc	7.0.8
nose	1.3.7	pysocks	1.7.1	tini	0.18.0
notebook	6.0.3	pytables	3.4.4	tk	8.6.8
ntlm-auth	1.4.0	python	3.6.10	toolz	0.10.0
numba	0.48.0	python-cufflinks	0.17.3	torchvision	0.5.0
numexpr	2.7.1	python-dateutil	2.8.1	tornado	6.0.4
numpy	1.18.1	pytorch	1.4.0	tzqdm	4.46.0
numpy-base	1.18.1	pytz	2020.1	traitlets	4.3.3
nvidia-ml-py3	7.352.0	pyviz_comms	0.7.4	urllib3	1.25.8
oauthlib	3.1.0	pywavelets	1.1.1	vincent	0.4.4
olefile	0.46	pyyaml	5.3.1	wasabi	0.2.2
openjpeg	2.3.0	pyzmq	18.1.1	wcwidth	0.1.9
openpyxl	3.0.3	readline	7	webencodings	0.5.1
openssl	1.1.1g	requests	2.23.0	werkzeug	1.0.1
opt_einsum	3.1.0	requests-kerberos	0.12.0	wheel	0.34.2
packaging	20.3	requests-oauthlib	1.3.0	widgetsnbextension	3.5.1
pandas	1.0.3	requests-toolbelt	0.9.1	wrapt	1.12.1
pandocfilters	1.4.2	requests_ntlm	1.1.0	xarray	0.15.1
panel	0.8.0	retrying	1.3.3	xerces-c	3.2.2
papermill	1.2.1	rise	5.6.1	xlrd	1.2.0
param	1.9.3	rsa	4	xlwt	1.3.0
parso	0.7.0	rtree	0.8.3	xz	5.2.5
partd	1.1.0	ruamel_yaml	0.15.87	yaml	0.1.7
patsy	0.5.1	s3transfer	0.3.3	zeromq	4.3.1
pcre	8.43	scikit-image	0.15.0	zict	2.0.0
pexpect	4.8.0	scikit-learn	0.21.3	zipp	3.1.0
pickleshare	0.7.5	scipy	1.4.1	zlib	1.2.11
pillow	6.2.2	seaborn	0.9.0	zstd	1.3.7
pip	20.0.2	secretstorage	3.1.0		02
pixman	0.38.0	send2trash	1.5.0		03
plac	0.9.6	setuptools	46.2.0		04
plotly	4.6.0	shapely	1.6.4		05