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# Step By Step Installation Illustration KNIME Geospatial Analytics Extension

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# Install New Python Environment

## Anaconda Prompt > Run as Administrator

*conda info --env*

*conda create -n my\_python\_env python=3.9 knime-python-base knime-extension geopandas osmnx keplergl pulp pandarallel mgwr pysal spreg -c knime -c conda-forge*

*activate my\_python\_env*

*pip install pyDataverse*

*conda info*

```
Select Administrator: Anaconda Prompt (Anaconda3) - conda create -n my_python_env python=3.9 knime-python-base knime-exten...
(base) C:\WINDOWS\system32>conda info --env
# conda environments:
#
base                * C:\ProgramData\Anaconda3
KNIMEPython          C:\ProgramData\Anaconda3\envs\KNIMEPython

(base) C:\WINDOWS\system32>conda create -n my_python_env python=3.9 knime-python-base knime-extension geopandas osmnx k
eplergl pulp pandarallel mgwr pysal spreg -c knime -c conda-forge
Collecting package metadata (current_repodata.json): done
Solving environment: failed with repodata from current_repodata.json: The following packages are not available from the current channel(s):
Collecting package metadata (repodata.json): done
Solving environment: done

==> WARNING: A newer version of conda exists. <==
  current version: 4.13.0
  latest version: 22.9.0

Please update conda by running

  $ conda update -n base -c defaults conda
```

```
Administrator: Anaconda Prompt (Anaconda3) - conda create -n my_python_env python=3.9 knime-python-base knime-extension ge...
zipp                conda-forge/noarch::zipp-3.10.0-pyhd8ed1ab_0
zlib                conda-forge/win-64::zlib-1.2.13-hcfcfb64_4
zstd                conda-forge/win-64::zstd-1.5.2-h7755175_4

Proceed ([y]/n)? y

Downloading and Extracting Packages
inequality-1.0.0    | 14 KB | ##### | 100%
pulp-2.6.0         | 1.4 MB | ##### | 100%
click-8.1.3        | 75 KB | ##### | 100%
```

```
(base) C:\WINDOWS\system32>activate my_python_env
(my_python_env) C:\WINDOWS\system32>conda info

active environment : my_python_env
active env location : C:\ProgramData\Anaconda3\envs\my_python_env
shell level : 2
```

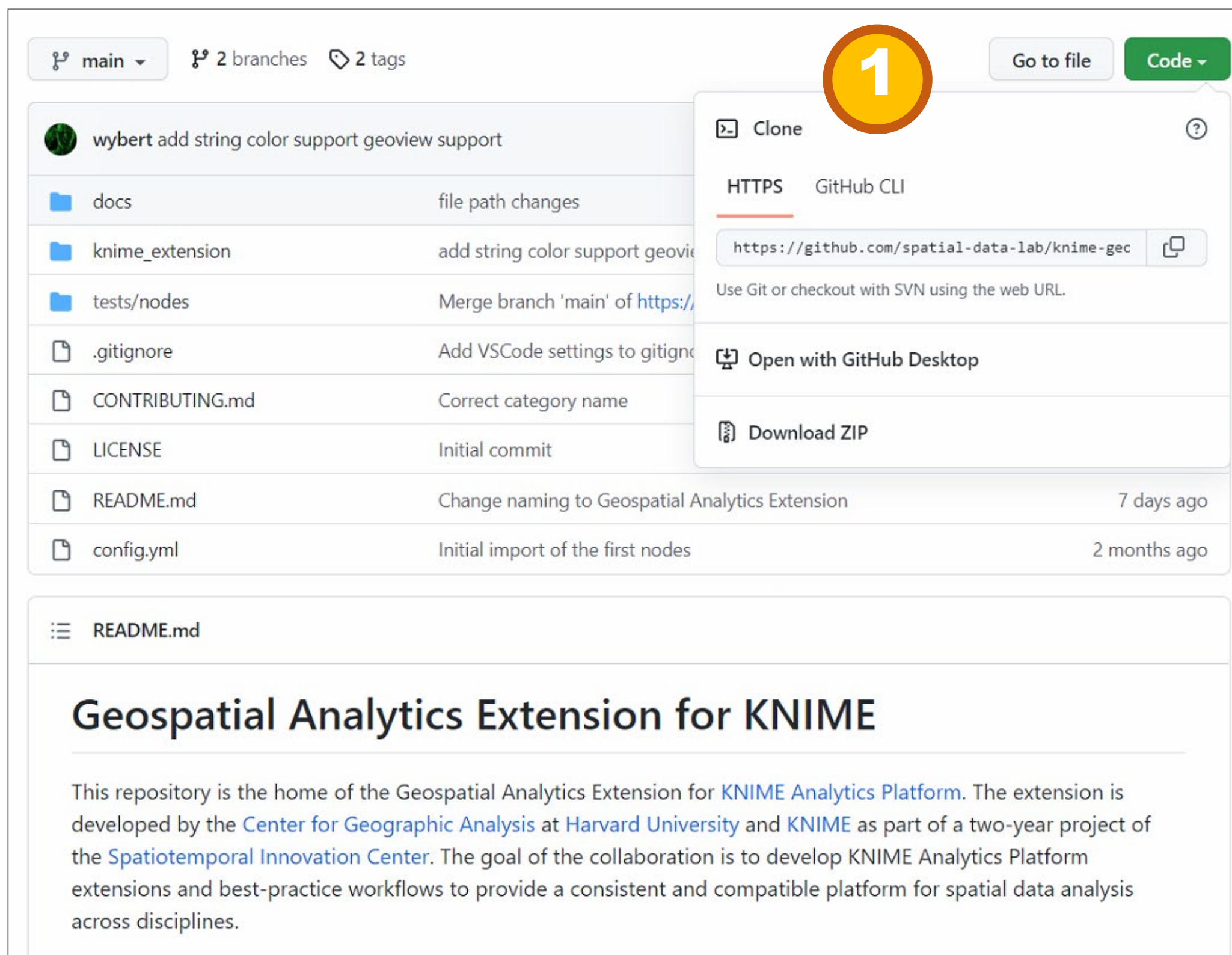


# Download Extension in GitHub

<https://github.com/spatial-data-lab/knime-geospatial-extension>

Code > Download ZIP > unzip the ZIP file

Open *config.yml* with notepad> revise the path of *src* and *conda\_env*, set *debug\_mode* as False



main 2 branches 2 tags

Clone

HTTPS GitHub CLI

<https://github.com/spatial-data-lab/knime-gec>

Use Git or checkout with SVN using the web URL.

Open with GitHub Desktop

Download ZIP

Go to file Code

wybert add string color support geoview support

docs file path changes

knime\_extension add string color support geoview

tests/nodes Merge branch 'main' of https://

.gitignore Add VSCode settings to gitignore

CONTRIBUTING.md Correct category name

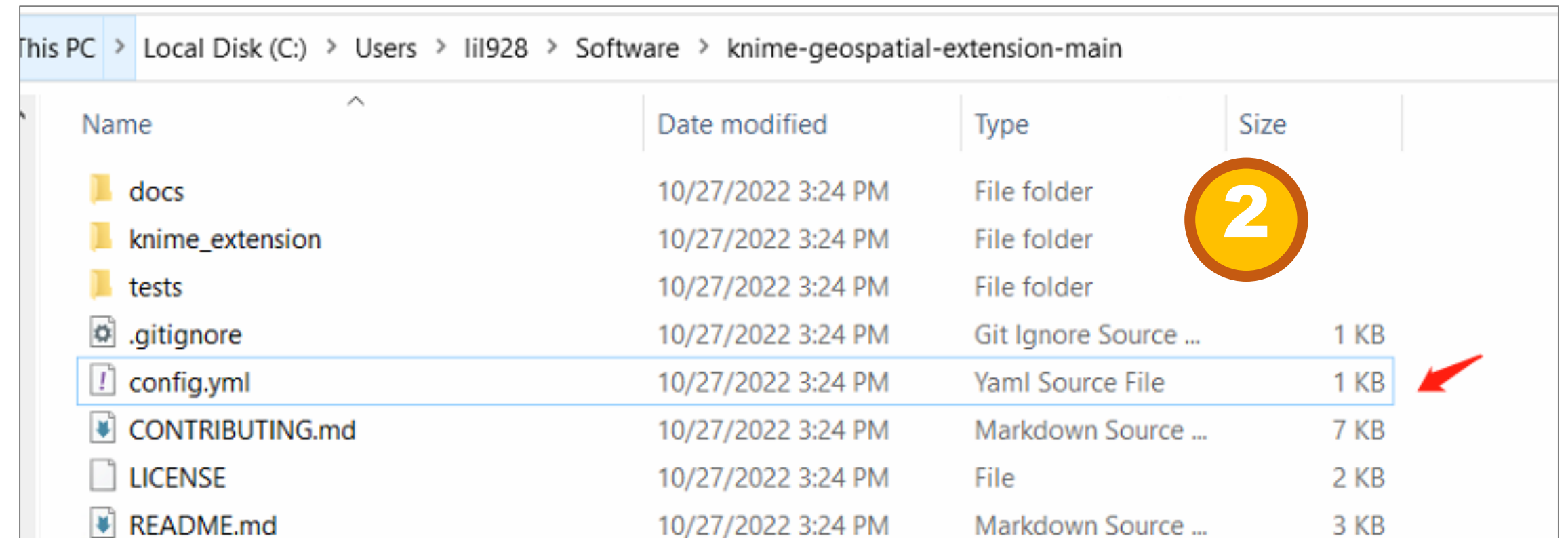
LICENSE Initial commit

README.md Change naming to Geospatial Analytics Extension 7 days ago

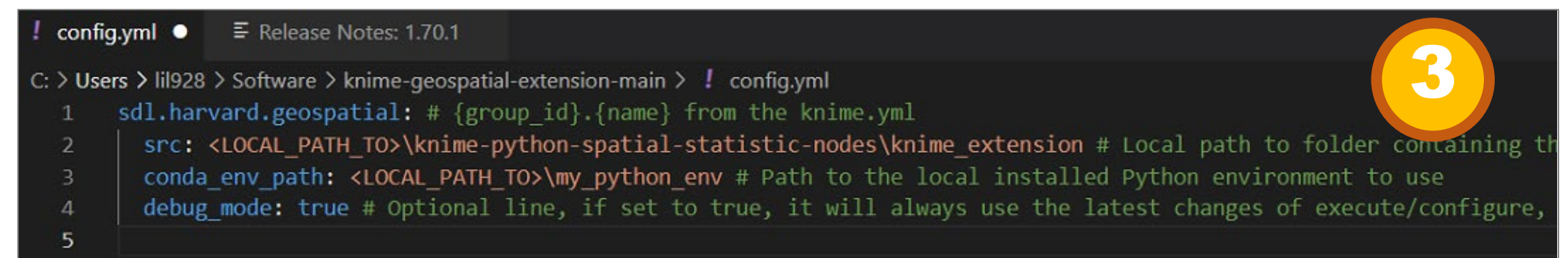
config.yml Initial import of the first nodes 2 months ago

Geospatial Analytics Extension for KNIME

This repository is the home of the Geospatial Analytics Extension for [KNIME Analytics Platform](#). The extension is developed by the [Center for Geographic Analysis](#) at [Harvard University](#) and [KNIME](#) as part of a two-year project of the [Spatiotemporal Innovation Center](#). The goal of the collaboration is to develop KNIME Analytics Platform extensions and best-practice workflows to provide a consistent and compatible platform for spatial data analysis across disciplines.



Name	Date modified	Type	Size
docs	10/27/2022 3:24 PM	File folder	
knime_extension	10/27/2022 3:24 PM	File folder	
tests	10/27/2022 3:24 PM	File folder	
.gitignore	10/27/2022 3:24 PM	Git Ignore Source ...	1 KB
config.yml	10/27/2022 3:24 PM	Yaml Source File	1 KB
CONTRIBUTING.md	10/27/2022 3:24 PM	Markdown Source ...	7 KB
LICENSE	10/27/2022 3:24 PM	File	2 KB
README.md	10/27/2022 3:24 PM	Markdown Source ...	3 KB



```
! config.yml • Release Notes: 1.70.1
C: > Users > lil928 > Software > knime-geospatial-extension-main > ! config.yml
1  sdl.harvard.geospatial: # {group_id}.{name} from the knime.yml
2  src: <LOCAL_PATH_TO>\knime-python-spatial-statistic-nodes\knime_extension # Local path to folder containing th
3  conda_env_path: <LOCAL_PATH_TO>\my_python_env # Path to the local installed Python environment to use
4  debug_mode: true # Optional line, if set to true, it will always use the latest changes of execute/configure,
5
```

```
sdl.harvard.geospatial: # {group_id}.{name} from the knime.yml
src: C:\Users\lil928\Software\knime-geospatial-extension-main\knime_extension
conda_env_path: C:\ProgramData\Anaconda3\envs\my_python_env
debug_mode: false
```



# Download Nightly Build

<https://www.knime.com/nightly-build-downloads>

Revise knime.ini with notepad, add path to config.yml

### Really, really, *really* important disclaimer

This is most definitely not production quality code. These nightly builds are what we use internally to validate and test recent developments, so they are not tested as thoroughly as standard KNIME releases. Furthermore new nodes or functionality may change substantially (or disappear entirely) from one build to the next. It's even possible that workflows you edit or create with nightly builds stop being readable by future (or past) versions...

These nightlies are a great way to get a sneak peek at what may be coming in the next version of KNIME and provide feedback and suggestions. They are not a particularly safe way to do real work.

Looking for the latest stable release? [Click here.](#)

1

#### KNIME Analytics Platform


See the full list of changes in the [changelog](#).


Windows	
KNIME Analytics Platform Nightly build for Windows (installer)	64bit
KNIME Analytics Platform Nightly build for Windows (self extracting archive)	64bit
KNIME Analytics Platform Nightly build for Windows (zip archive)	64bit (SHA-256)
Linux	
KNIME Analytics Platform Nightly build for Linux	64bit (SHA-256)
Mac OS X	
KNIME Analytics Platform Nightly build for Mac OS X (dmg)	64bit

configuration	10/27/2022 9:03 AM	File folder	
dropins	10/27/2022 9:03 AM	File folder	
features	10/27/2022 9:03 AM	File folder	
licenses	10/27/2022 9:03 AM	File folder	
p2	10/27/2022 9:03 AM	File folder	
plugins	10/27/2022 9:03 AM	File folder	
readme	10/27/2022 9:03 AM	File folder	
.build-id	10/27/2022 9:03 AM	BUILD-ID File	1 KB
artifacts.xml	10/27/2022 9:03 AM	XML Document	152 KB
knime.exe	10/27/2022 4:38 AM	Application	414 KB
knime.ini	10/28/2022 2:37 PM	Configuration setti...	2 KB
knimec.exe	10/27/2022 4:40 AM	Application	231 KB
knime-workspace.zip	10/27/2022 3:52 AM	zip Archive	7,520 KB
LICENSE.TXT	10/27/2022 3:52 AM	Text Document	1 KB
README.txt	10/27/2022 3:52 AM	Text Document	2 KB

```
*knime.ini - Notepad
File Edit Format View Help
-startup
plugins/org.eclipse.equinox.launcher_1.6.400.v20210924-0641.jar
--launcher.library
plugins/org.eclipse.equinox.launcher.win32.win32.x86_64_1.2.500.v20220509-0833
--launcher.defaultAction
openFile
-vm
plugins/org.knime.binary.jre.win32.x86_64_17.0.3.20220621/jre/bin/server/jvm.dll
-vmargs
-server
-Dsun.java2d.d3d=false
-Dosgi.classloader.lock=classname
-XX:+UnlockDiagnosticVMOptions
-Dsun.net.client.defaultReadTimeout=0
-XX:CompileCommand=exclude,javax/swing/text/GlyphView,getBreakSpot
-Dknime.xml.disable_external_entities=true
--add-opens=java.base/java.lang=ALL-UNNAMED
--add-opens=java.base/java.lang.invoke=ALL-UNNAMED
--add-opens=java.base/java.net=ALL-UNNAMED
--add-opens=java.base/java.nio=ALL-UNNAMED
--add-opens=java.base/java.nio.channels=ALL-UNNAMED
--add-opens=java.base/java.util=ALL-UNNAMED
--add-opens=java.base/sun.nio.ch=ALL-UNNAMED
--add-opens=java.base/sun.nio=ALL-UNNAMED
--add-opens=java.desktop/javafx.swing.plaf.basic=ALL-UNNAMED
--add-opens=java.base/sun.net.www.protocol.http=ALL-UNNAMED
-Xmx50g
-Dorg.eclipse.swt.browser.IEVersion=11001
-Dsun.awt.noerasebackground=true
-Dequinox.statechange.timeout=30000
-Darrow.enable_unsafe_memory_access=true
-Darrow.memory.debug allocator=false
-Darrow.enable_null_check_for_get=false
--add-opens=java.security.jgss/sun.security.jgss.krb5=ALL-UNNAMED
--add-exports=java.security.jgss/sun.security.jgss=ALL-UNNAMED
--add-exports=java.security.jgss/sun.security.jgss.spi=ALL-UNNAMED
--add-exports=java.security.jgss/sun.security.krb5.internal=ALL-UNNAMED
--add-exports=java.security.jgss/sun.security.krb5=ALL-UNNAMED
-Dknime.python.extension.config=C:\Users\lil928\Software\knime-geospatial-extension-main\config.yml
```

-Dknime.python.extension.config=C:\Users\lil928\Software\knime-geospatial-extension-main\config.yml

 Open for Innovation  
**KNIME**

 Center for Geographic Analysis  
Harvard University



# Install Python and Geospatial extension

KNIME > install KNIME extensions

Search python> check  
KNIME Python Extension Development(Labs)  
KNIME Python Integration(Labs)

Search geo> uncheck Group item by category >check  
KNIME Geospatial Extension

Click Next >... > restart KNIME

icons	10/27/2022 3:24 PM	File folder	
src	10/28/2022 3:17 PM	File folder	
geospatial_env.yml	10/27/2022 3:24 PM	Yaml Source File	1 KB
knime.yml	10/27/2022 3:24 PM	Yaml Source File	1 KB
LICENSE.TXT	10/27/2022 3:24 PM	Text Document	2 KB
README.md	10/27/2022 3:24 PM	Markdown Source ...	1 KB

geospatial\_env.yml - Notepad

File Edit Format View Help

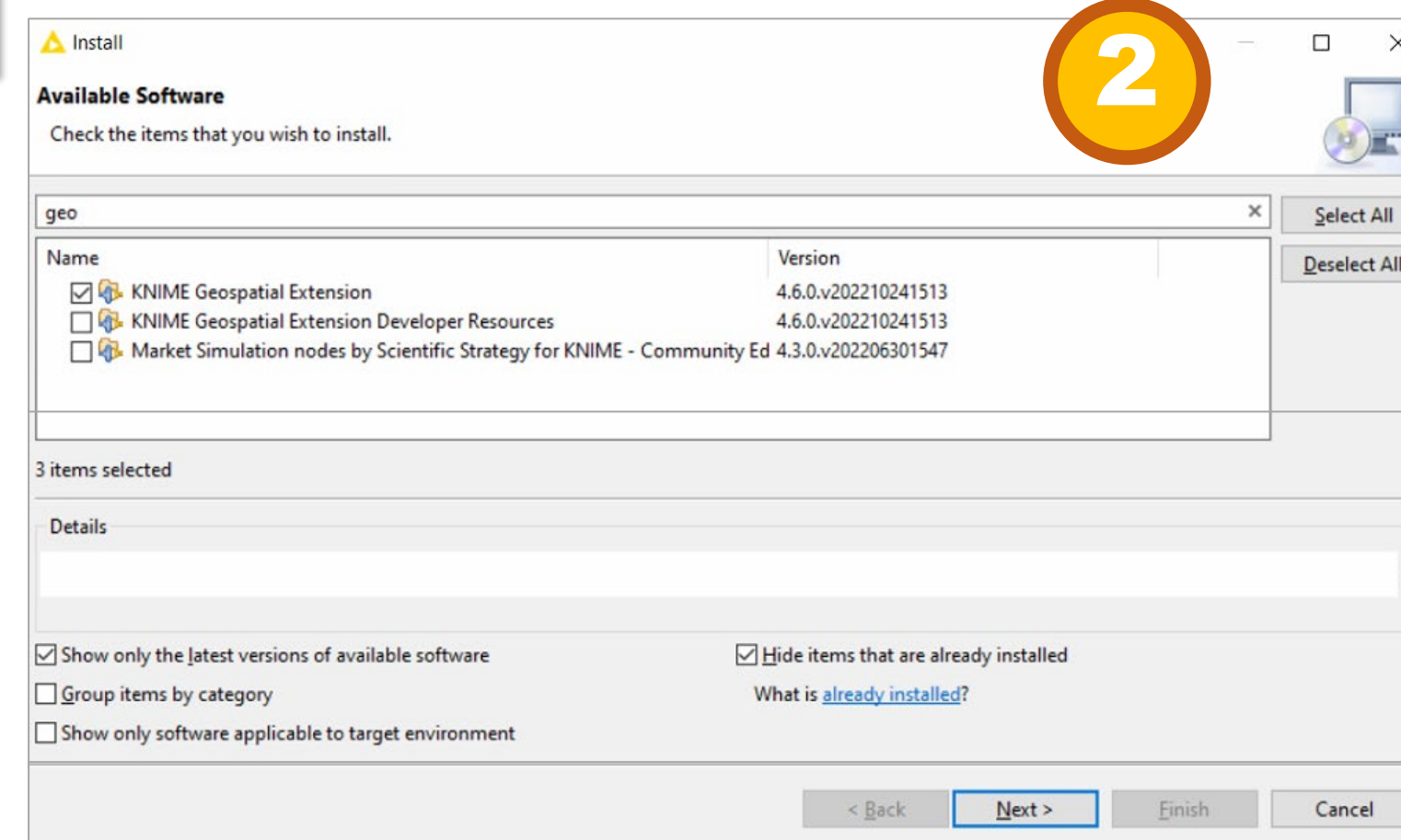
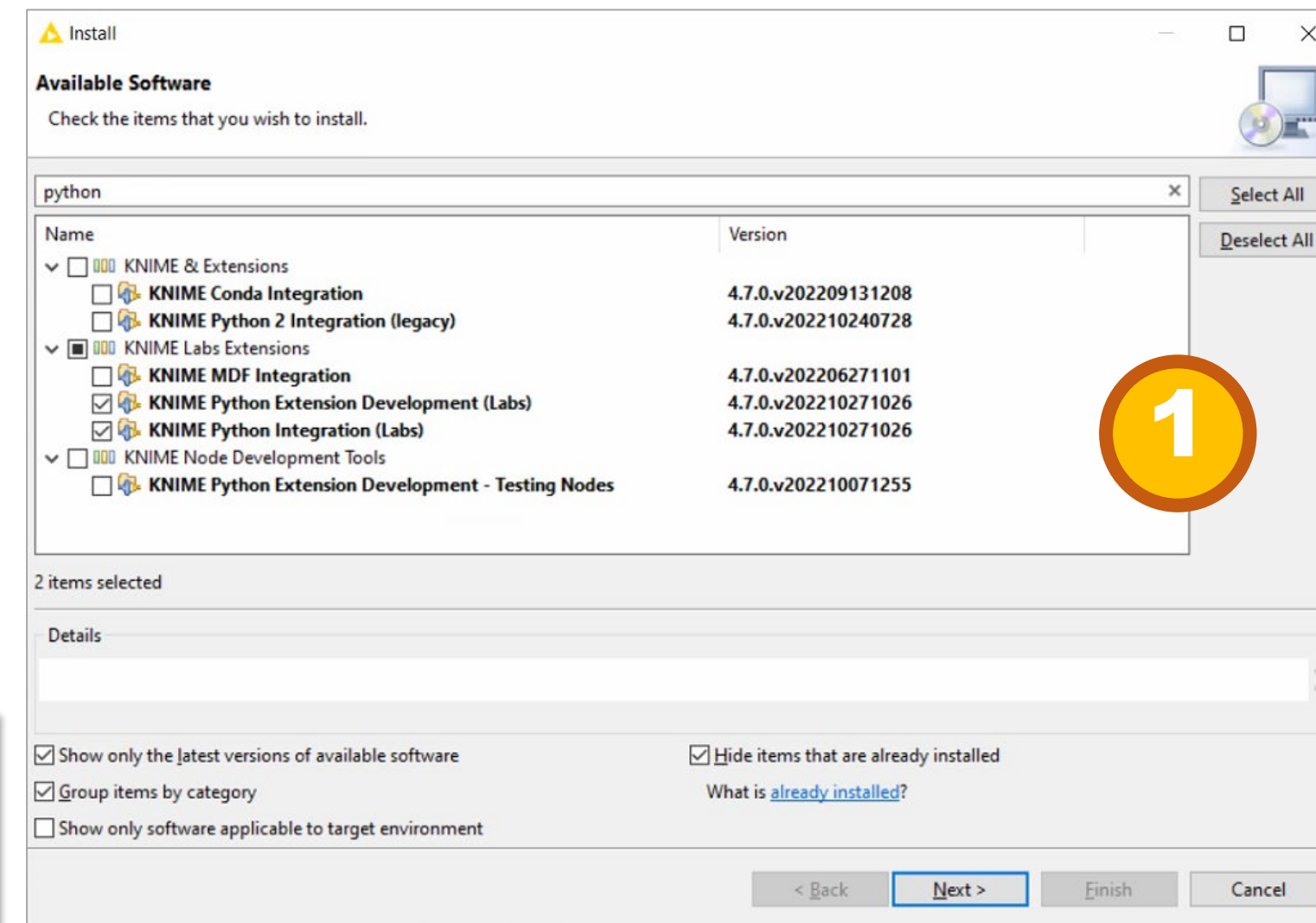
name: geospatial\_env  
channels:

- knime
- conda-forge

dependencies:

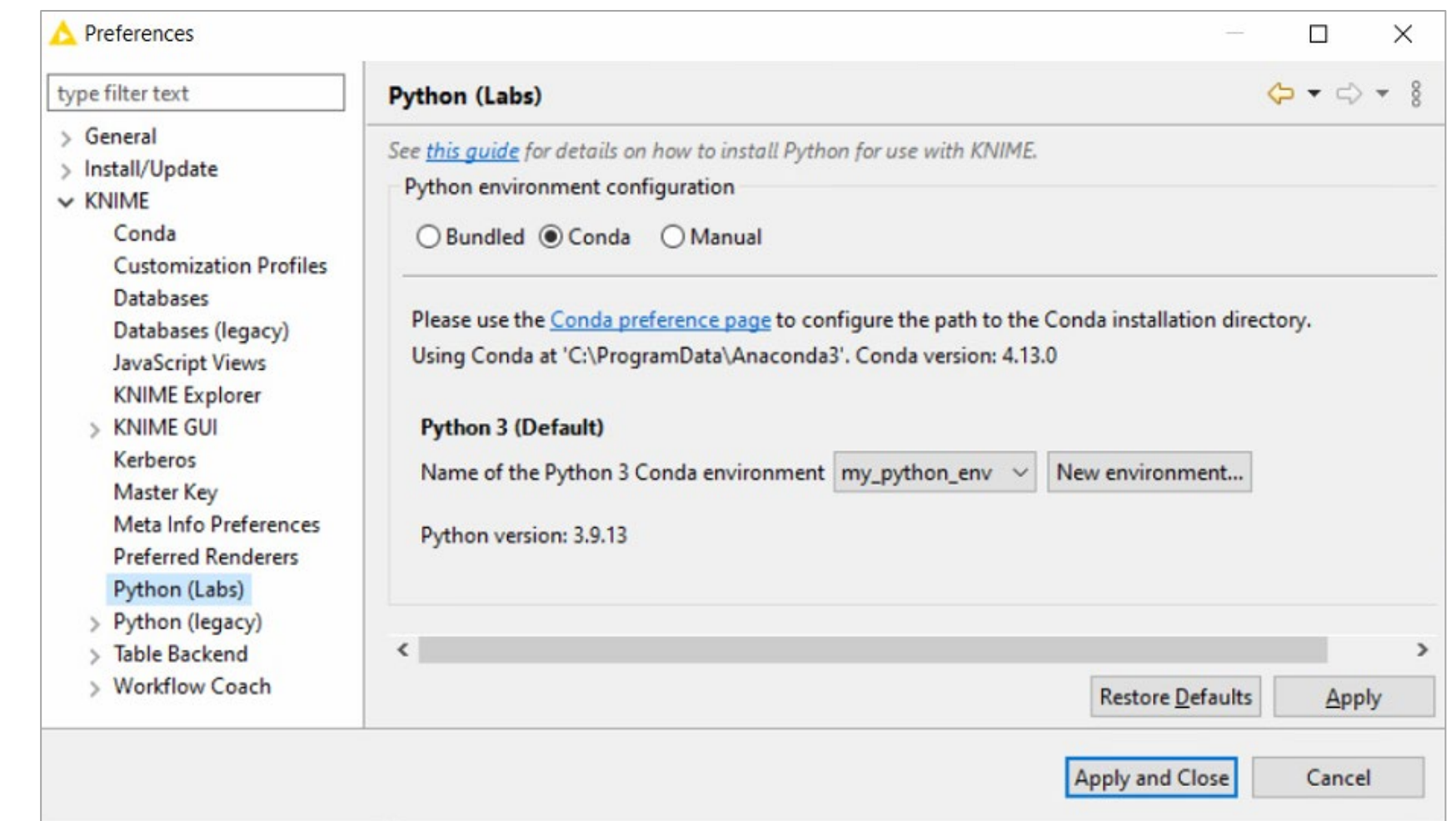
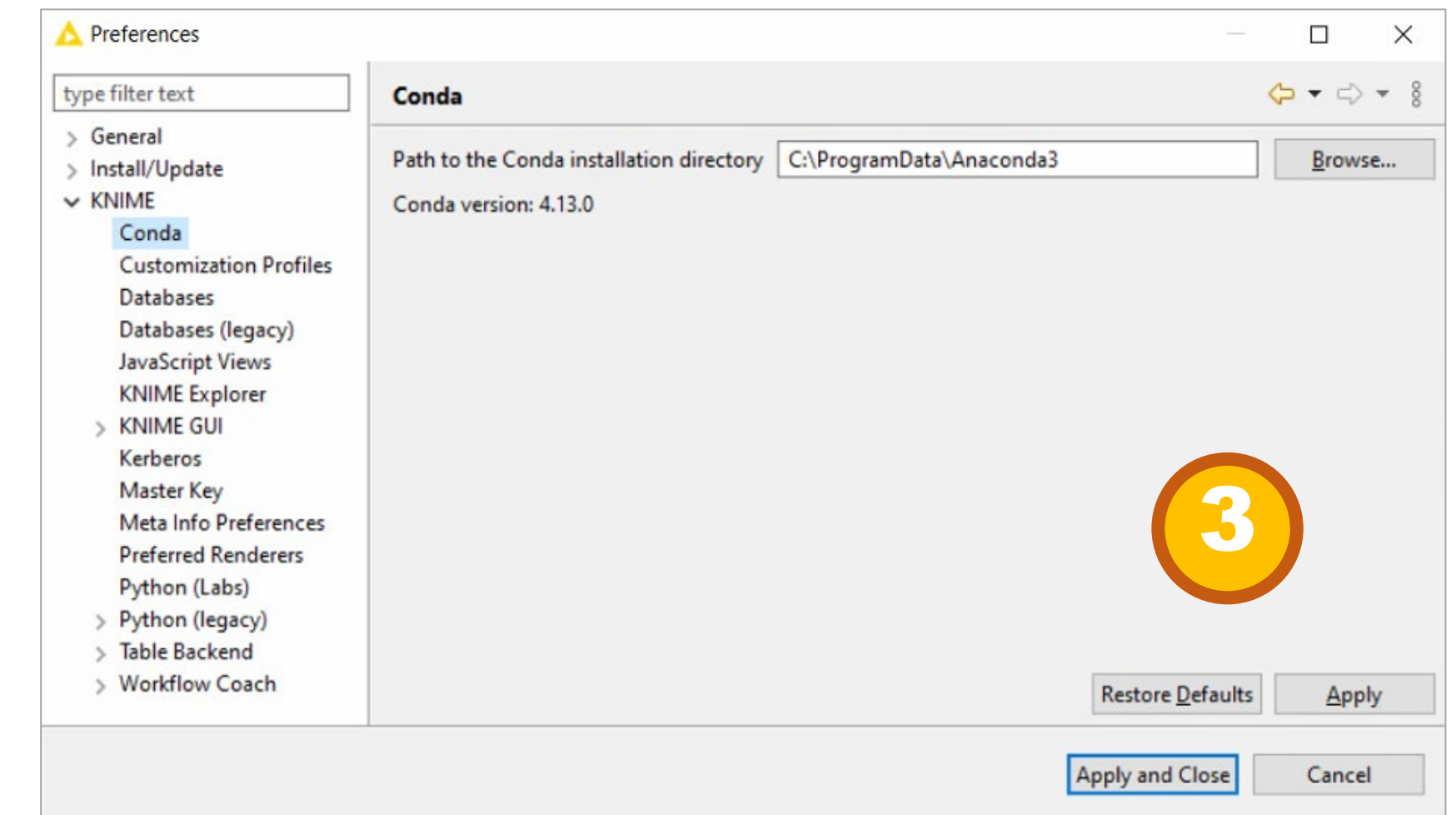
- packaging
- python=3.9
- knime-extension
- knime-python-base
- geopandas
- keplergl
- libpysal
- mgwr
- osmnx
- pulp
- pysal
- seaborn
- pandarallel
- pip
- pip:
- pycharts
- pyDataverse

Check package availability



Log file is located at: C:\Users\lil928\knime\.metadata\knime\knime.log

```
ERROR PurePythonNodeSetFactory Failed to parse Python node extension at path 'C:\Users\lil928\Software\knime-geospatial-extension-main\knime_extension'.
ERROR PurePythonNodeSetFactory Failed to parse Python node extension at path 'C:\Users\lil928\Software\knime-geospatial-extension-main\knime_extension'.
```





# Successful loaded Extension

Geospatial Analytics

Exploratory Spatial Data Analysis

Global Geary's C

Global Getis-Ord

Global Moran's I

Local Getis-Ord

Local Moran's I

Spatial Weights

Open Datasets

OSM GeoBoundary

OSM Network

OSM POIs

US ACS-5

US2020 Census

US2020 TIGER

Spatial Calculation

Bounds

Area

Bounding Box

Convex Hull

Coordinates XYZ

Length

Total Bounds

Unary Union

Spatial Conversion

GeoJSON to Geometry

Geometry to GeoJSON

Geometry to Lat/Long

Geometry to WKB

Geometry to WKT

Lat/Lon to Geometry

WKB to Geometry

WKT to Geometry

Spatial IO

GeoPackage Reader

GeoFile Reader

GeoFile Writer

GeoPackage Writer

Spatial Manipulation

Simplify

Buffer

Clip

Dissolve

Euclidean Distance

Multiple Ring Buffer

NearestJoin

Overlay

SpatialJoin

Spatial Modelling

Spatial Lag Panel Model with Fixed Effects

Geographically Weighted Regression

Geographically Weighted Regression Predictor

LSCP

MCLP

Multiscale Geographically Weighted Regression

P-median

Spatial 2SLS

Spatial Error Panel Model with Fixed Effects

Spatial OLS

Spatial Transformation

Multipart To Singlepart

CRS Transformer

Geometry To Point

Line To MultiPoint

Points To Line

Polygon To Line

Spatial Visualization

Kepler.gl Geoview

Geospatial View

Geospatial View Static

KNIME Analytics Platform (Nightly Build)

File Edit View Help

KNIME Explorer

Workflow Coach

Node Repository

Outline

Console

Welcome to KNIME Analytics Platform

Open for Innovation  
KNIME

Search KNIME Hub for workflows, nodes and more...

Welcome back

There are updates for 2 extensions available.

Update now

1

2

3

4

Blog

Remove data analytics bottlenecks by upskilling your

Tips & Tricks

Dynamic column names

The "Column Expressions" node can work with columns specified by position

Events

KNIME Console

\*\*\*\*\*  
\*\*\* Welcome to KNIME Analytics Platform v4.7.0.v202210211410 \*\*\*  
\*\*\* Copyright by KNIME AG, Zurich, Switzerland \*\*\*  
\*\*\*\*\*  
Log file is located at: C:\Users\lil928\knime\.metadata\knime\knime.log

You are using a nightly build!

Step By Step  
Installation Illustration

# KNIME

# Geospatial Analytics

# Extension

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