

Step By Step Installation Illustration

# KNIME GEOSPATIAL ANALYTICS

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Harvard University



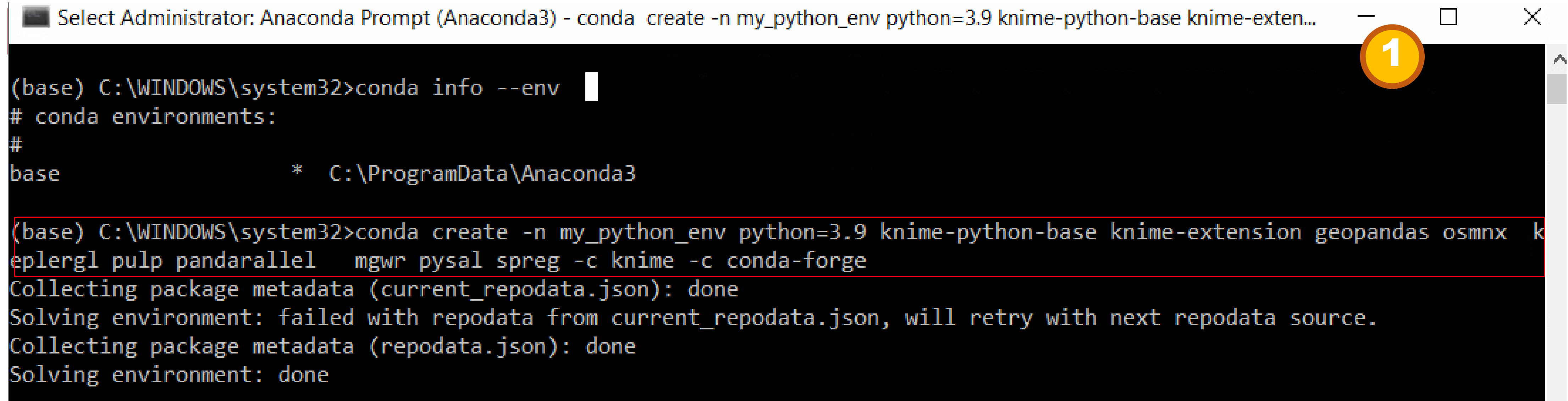
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**KNIME**

# Install New Python Environment

Download [Anaconda](#) and install > Anaconda Prompt > Run as Administrator

- 1 Run *conda info --env* to check the environment

Run *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*  
To install the new Python environment



Select Administrator: Anaconda Prompt (Anaconda3) - conda create -n my\_python\_env python=3.9 knime-python-base knime-extension...

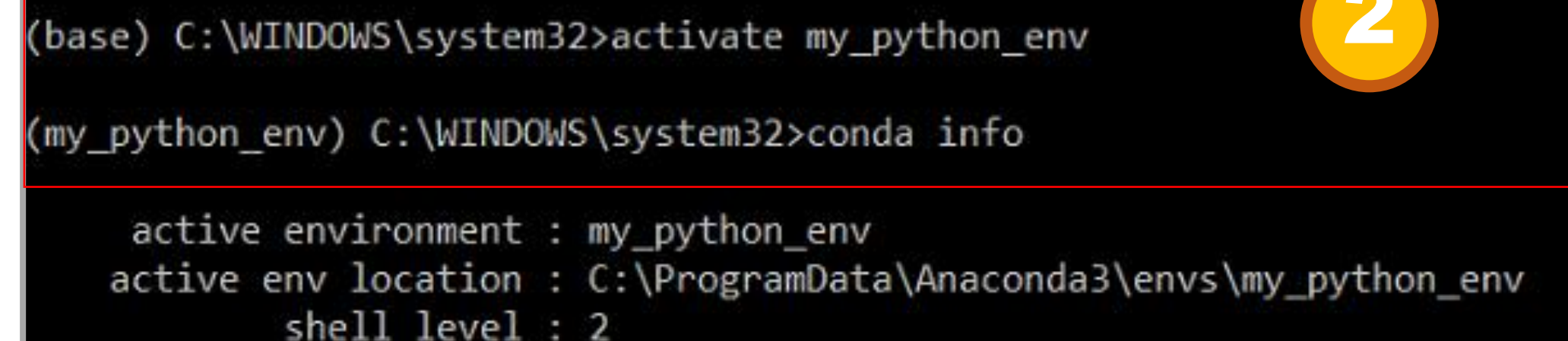
```
(base) C:\WINDOWS\system32>conda info --env
# conda environments:
#
base                * C:\ProgramData\Anaconda3

(base) C:\WINDOWS\system32>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
Collecting package metadata (current_repodata.json): done
Solving environment: failed with repodata from current_repodata.json, will retry with next repodata source.
Collecting package metadata (repodata.json): done
Solving environment: done
```

- 2 Run *activate my\_python\_env* to enter the new Python environment

Run *pip install pyDataverse*

Run *conda info*



```
(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
```

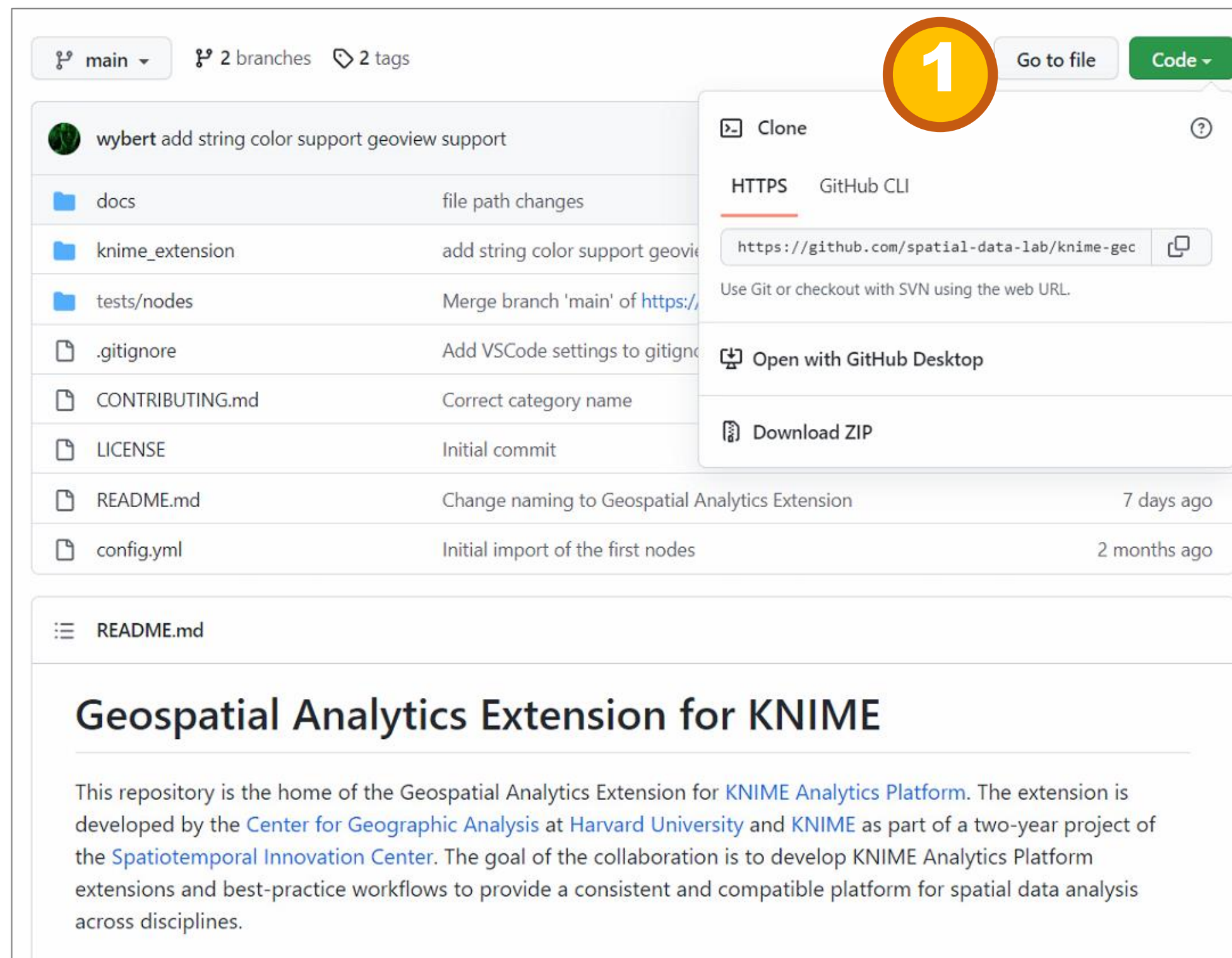


# Download Extension in GitHub

## Download Zip package from GitHub

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

- 1 Click *Code* > *Download ZIP*
- 2 Unzip the ZIP file to your local folder  
Open *config.yml* with Notepad(or VS code) revise the path of *src* and *conda\_env*, set *debug\_mode* as *false*



main 2 branches 2 tags

Code

Clone

HTTPS GitHub CLI

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

Use Git or checkout with SVN using the web URL.

Open with GitHub Desktop

Download ZIP

docs file path changes

knime\_extension add string color support geoview

tests/nodes Merge branch 'main' of https://github.com/spatial-data-lab/knime-geospatial-extension

.gitignore Add VSCode settings to gitignore

CONTRIBUTING.md Correct category name

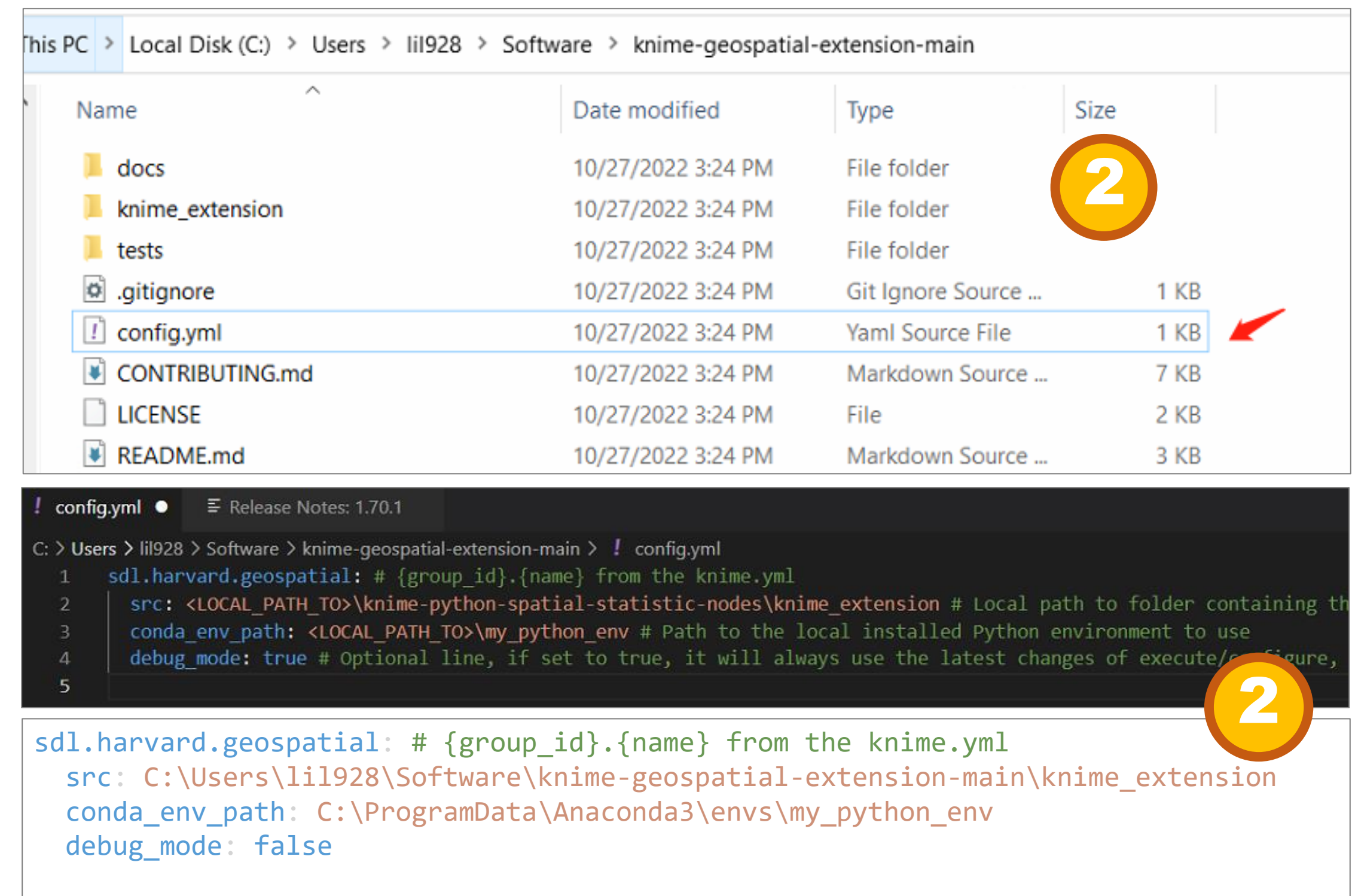
LICENSE Initial commit

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.



This PC > Local Disk (C:) > Users > lil928 > Software > knime-geospatial-extension-main

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 File	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 File	7 KB
LICENSE	10/27/2022 3:24 PM	File	2 KB
README.md	10/27/2022 3:24 PM	Markdown Source File	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 the
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/cr figure,
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

## Download KNIME Nightly Build

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

- 1 Download suitable or favorite file , e.g., *self extracting archive* for Windows
- 2 Unzip the self extracting archive
- 3 Edit **knime.ini** with Notepad
  - revise *Xmx2048m* to *Xmx8g* (or any possible Gigabytes for memory limitation)
  - add path to the file *config.yml* in the unzipped folder of [knime-geospatial-extension](#)

### 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.

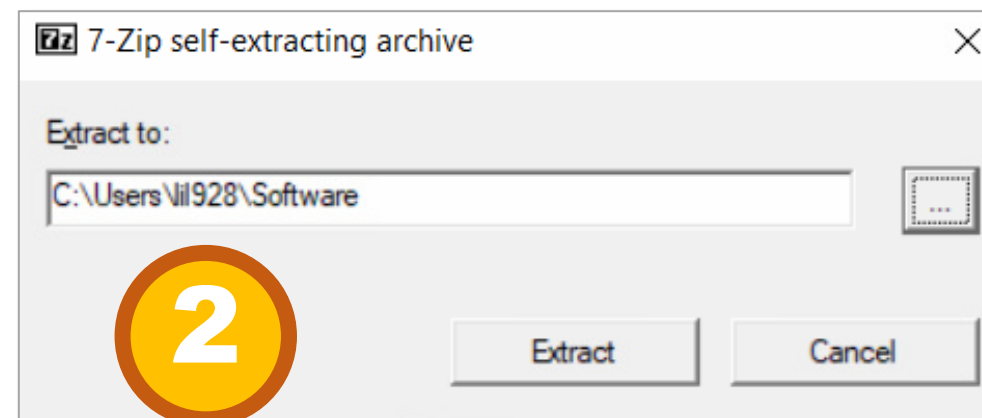
Looking for the latest stable release? [Click here.](#)

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



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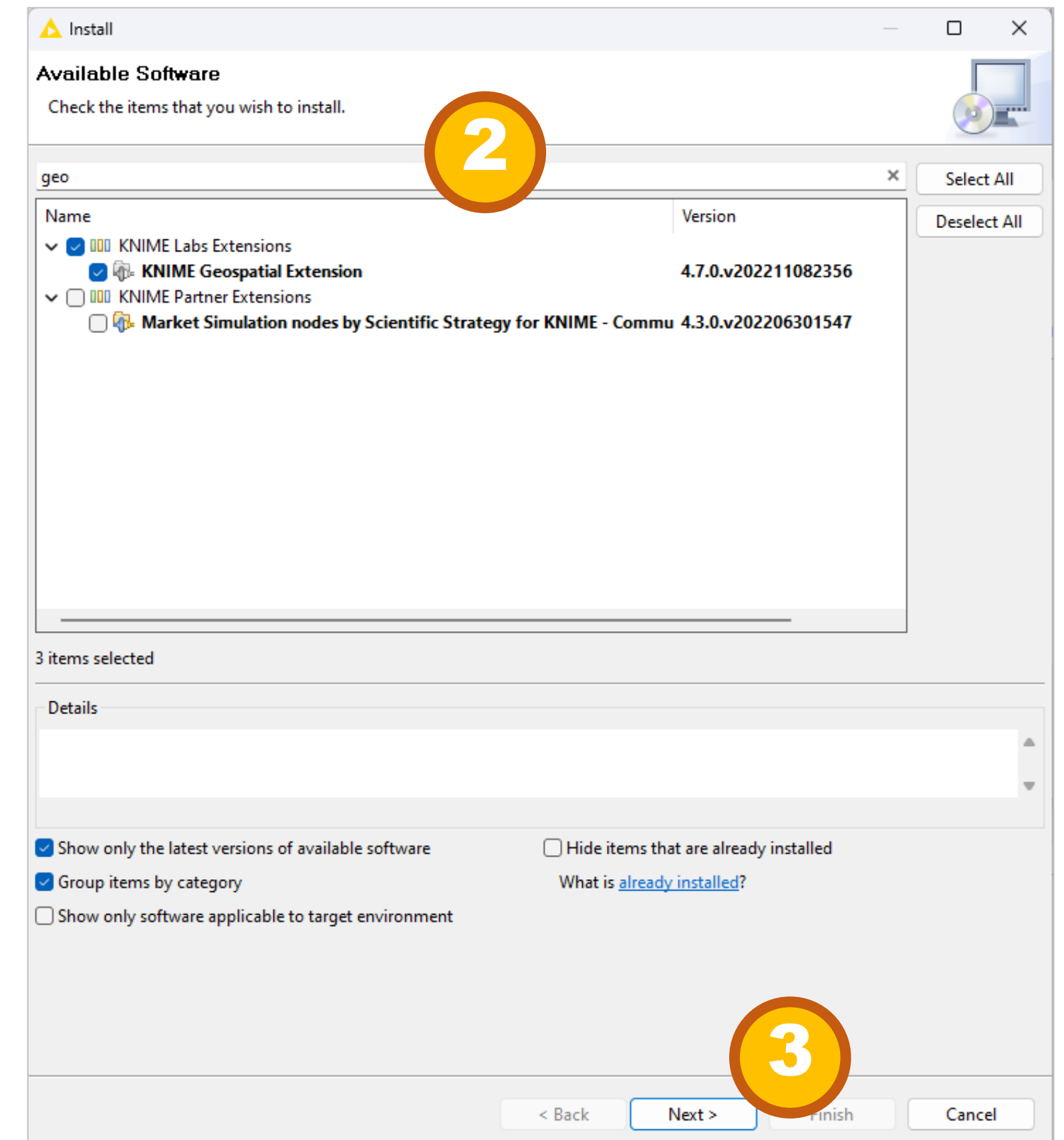
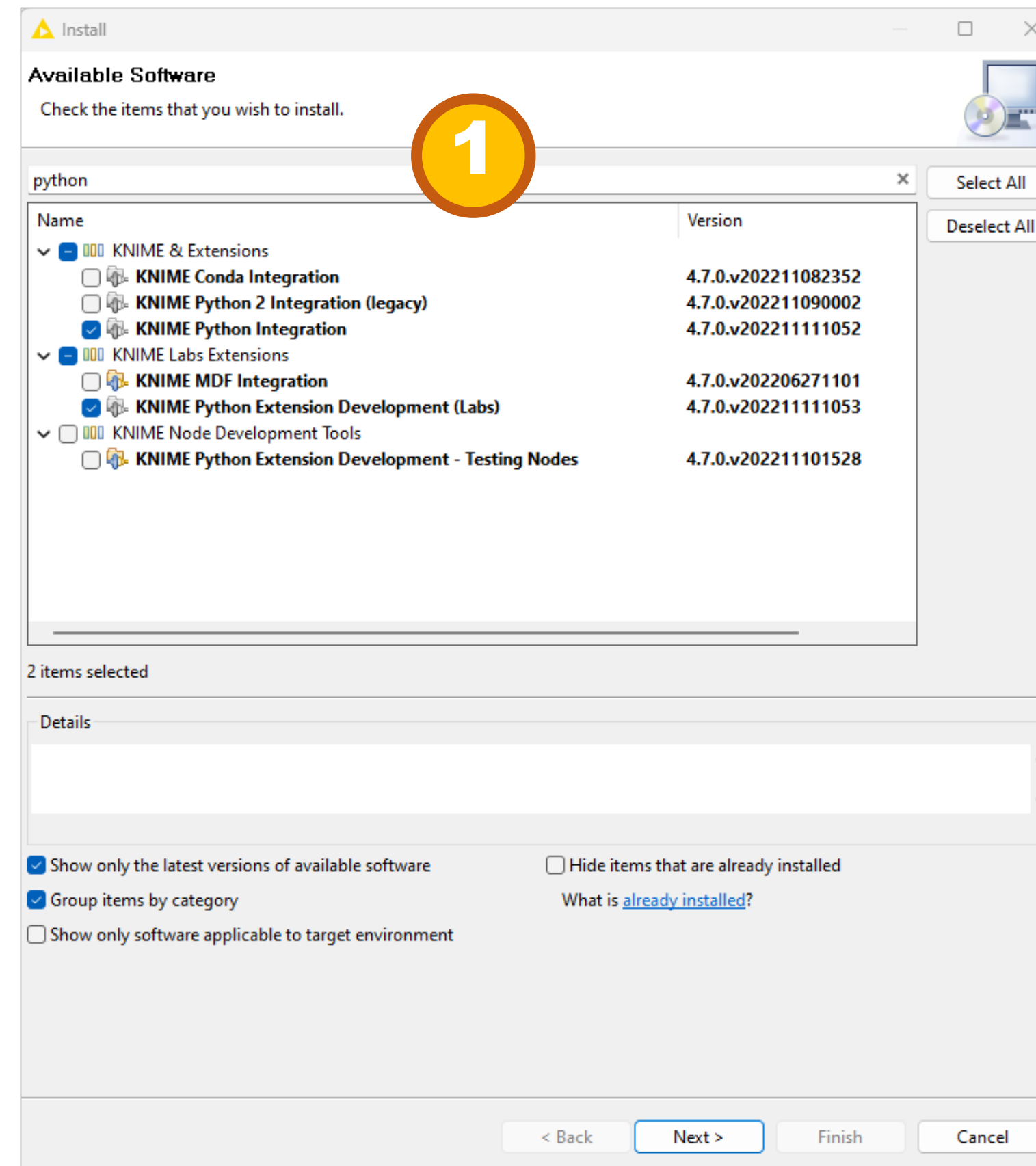
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KNIME

# Install Python and Geospatial extension

KNIME > install KNIME extensions

- 1 Search *python* > check  
*KNIME Python Extension Development(Labs)*  
*KNIME Python Integration*
- 2 Search *geo*> check  
*KNIME Geospatial Extension*
- 3 Click Next >... > restart KNIME





# Configure KNIME Python Environment

## KNIME > File > Preference

- 1 Go *KNIME* > *Conda*, use Browse to specify the Conda installation directory
- 2 Go *KNIME* > *Python*, specify the Conda environment for Python3(Default)
- 3 Click Apply and Close
- 4 Restart KNIME, the Geospatial Extension should display in the Node repository

If not displaying the extension and throw out the error in the console

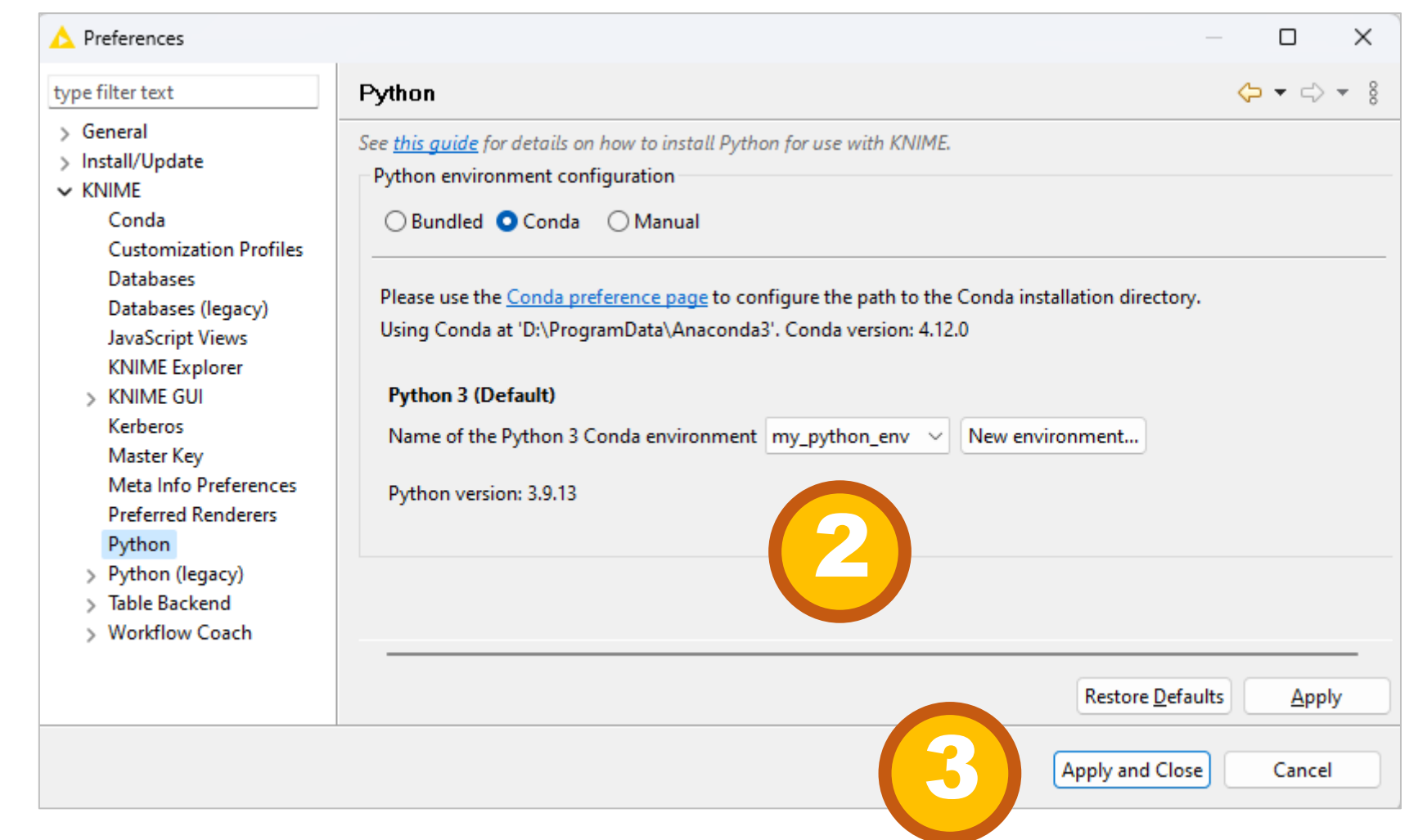
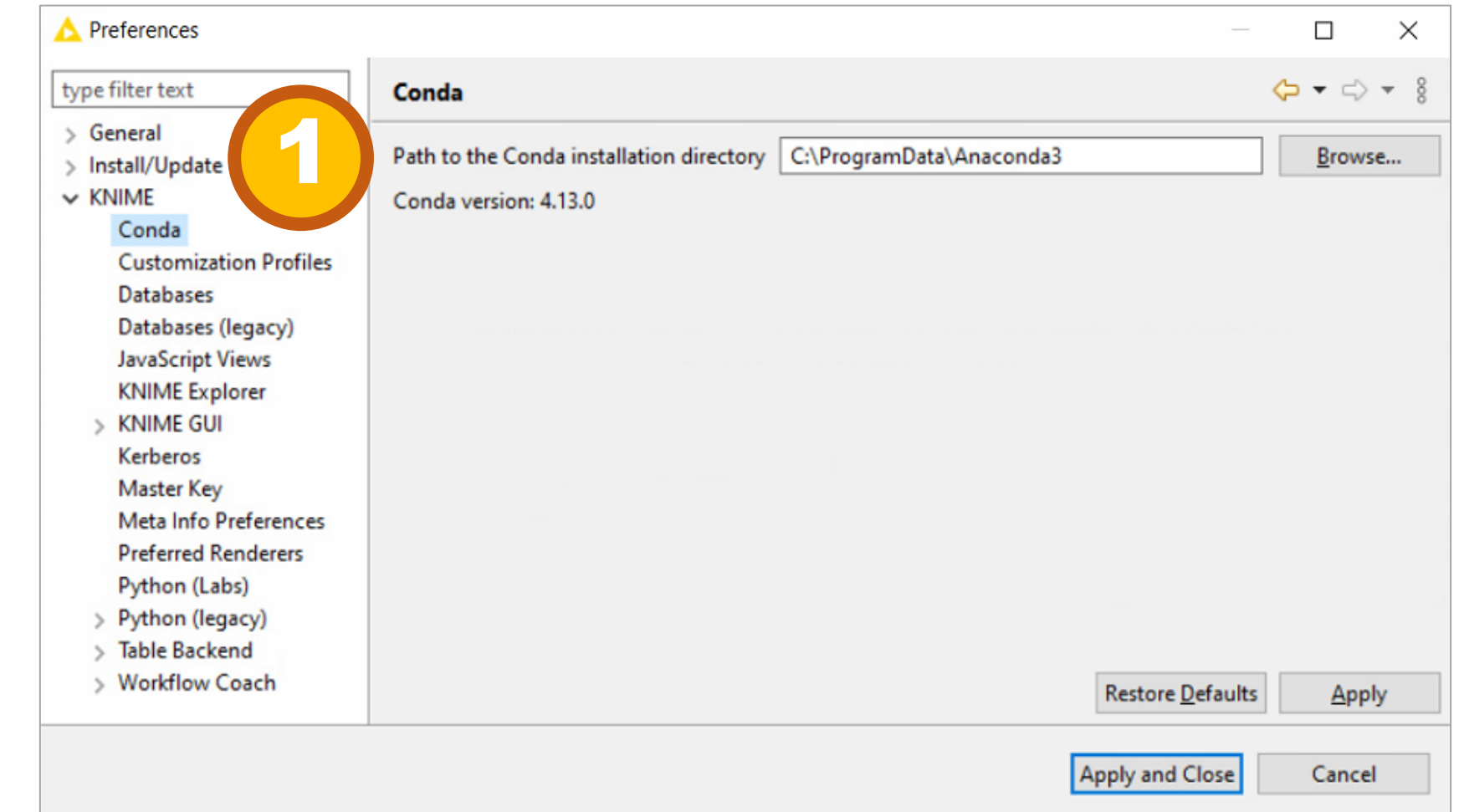
Failed to parse Python node extension at path ' ... '

Open the *geospatial\_env.yml*, check the package availability in your Python environment

```
Log file is located at: C:\Users\lil1928\knime\.metadata\knime\knime.log
ERROR PurePythonNodeSetFactory      Failed to parse Python node extension at path 'C:\Users\lil1928\Software\knime-geospatial-extension-main\knime_extension'.
ERROR PurePythonNodeSetFactory      Failed to parse Python node extension at path 'C:\Users\lil1928\Software\knime-geospatial-extension-main\knime_extension'.
```

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
```



# Successful loaded Extension

KNIME Analytics Platform (Nightly Build)

File Edit View Help

KNIME Explorer

Workflow Coach

Node Repository

IO

Manipulation

Views

Analytics

DB

Other Data Types

Structured Data

Scripting

Tools & Services

KNIME Labs

Workflow Control

Workflow Abstraction

Reporting

Geospatial Analytics

Welcome to KNIME Analytics Platform

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

Welcome back

There are updates for 2 extensions available. [Update now](#)

Remove data analytics bottlenecks by upskilling your

Dynamic column names

Tips & Tricks

Events

Outline

There is no active editor that provides an outline.

Console

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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