



INSTALLATION GUIDE

1. Install QGIS

Install QGIS version **3.XX** or higher to run the **AVHYAS** toolbox. **QGIS 3.14.1 setup** file is provided along with a test data folder, a dependency, an installation batch file and the AVHYAS plugin.

In case you already have QGIS 3.XX and above installed, you can skip this step. The structure of the complete package folder looks similar to the one given below. If any file is missing you may kindly check and copy the complete folder properly.



Dependencies



AVHYAS GNU General
Public License.txt



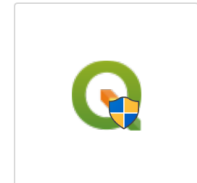
AVHYAS_0.1.zip



AVHYAS_Installation_guide.pdf



AVHYAS_TECHNICAL_DOCUMENT_USER_MANUAL.pdf



QGIS-OSGeo4W-3.14.1-1-Setup-x86_64.exe

After installing QGIS a folder structure similar to the one given below should be available under C->Program Files→ QGIS 3.14

Name	Date modified	Type	Size
7-Zip	09-09-2017 16:59	File folder	
Common Files	08-09-2020 12:17	File folder	
Dell	07-05-2017 05:58	File folder	
Dell Support Center	07-05-2017 05:57	File folder	
eScan	17-07-2020 12:21	File folder	
Exelis	08-09-2017 04:56	File folder	
Harris	15-05-2018 10:43	File folder	
Hexagon	08-09-2017 06:05	File folder	
HP	09-05-2018 14:03	File folder	
Intel	07-05-2017 05:54	File folder	
Internet Explorer	07-05-2017 06:32	File folder	
Java	16-09-2020 17:05	File folder	
JetBrains	18-09-2019 10:54	File folder	
Leica Geosystems	08-09-2017 06:09	File folder	
Microsoft Office	05-10-2017 11:15	File folder	
Microsoft Office 15	05-10-2017 11:25	File folder	
Mozilla Firefox	06-02-2020 11:25	File folder	
MSBuild	30-07-2016 19:21	File folder	
NewBlue	07-05-2017 06:15	File folder	
Npcap	18-12-2018 10:55	File folder	
NVIDIA Corporation	07-05-2017 06:02	File folder	
NVIDIA GPU Computing Toolkit	22-09-2017 10:05	File folder	
QGIS 2.18	27-07-2020 15:19	File folder	
QGIS 3.14	10-08-2020 14:31	File folder	
Realtek	07-05-2017 05:55	File folder	
Reference Assemblies	30-07-2016 19:21	File folder	
Seqrite	08-09-2020 12:17	File folder	

2. Install required python packages

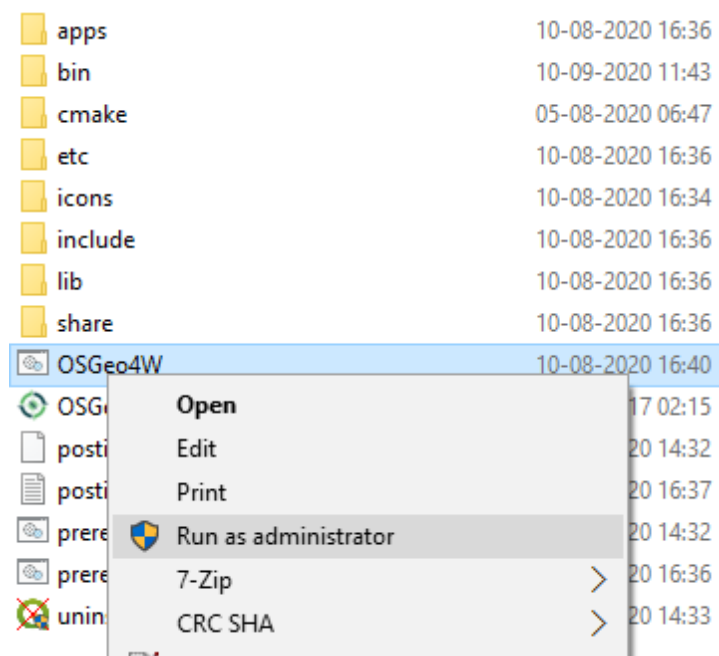
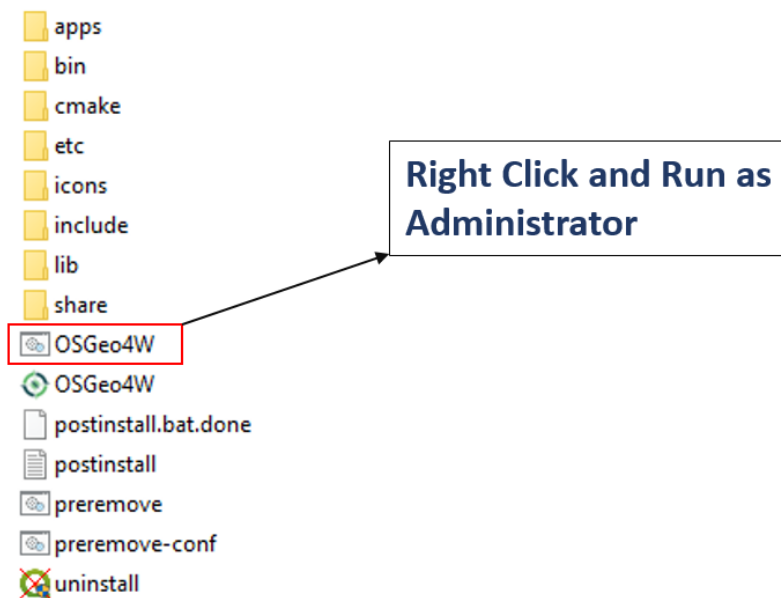
The AVHYAS plugin is dependent on the following python packages:

- **Numpy mkl**
- **scipy**
- **scikit-learn**
- **matplotlib**
- **tensorflow**
- **spectral**
- **tqdm**
- **spams**
- **cvxopt**
- **pyqtgraph**
- **scikit-image**
- **arosics**

Follow the installation instructions below in order to install these packages on **Windows** platform.

- I. Close QGIS, if it is open.
- II. Start the OSGeo4W Shell with admin rights.

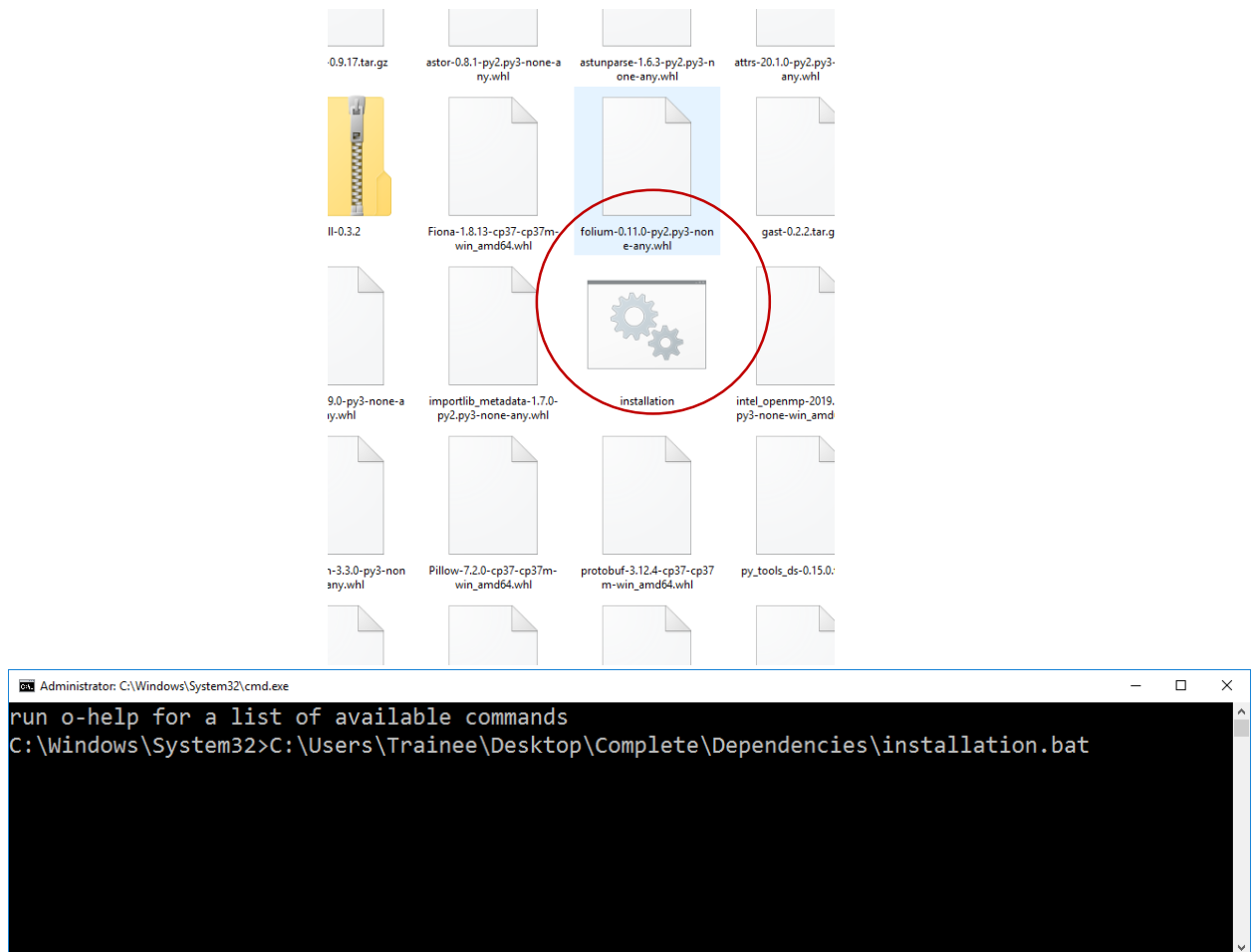
C:\ → Program Files → QGIS 3.xx → OSGeo4W Shell → Right-Click → Run as administrator



III. Next follow the following step

On running step II, a command prompt will open.

Installed the dependencies by specifying the full path of the **installation.bat** batch file inside the **Dependencies Folder**. Similar to the one below. Press enter and wait till the entire installation process complete.



IV. Now all packages will be installed automatically. After completion, the shell should show something like this:

```
Administrator: C:\Windows\System32\cmd.exe - C:\Users\Trainee\Desktop\CompleteDependencies\installation.bat
14\apps\python37\lib\site-packages (from requests->folium>=0.6.0->arosics) (1.25.9)
Requirement already satisfied: certifi>=2017.4.17 in c:\progra~1\qgis3~1.14\apps\python37\lib\
site-packages (from requests->folium>=0.6.0->arosics) (2020.4.5.2)
Requirement already satisfied: chardet<4,>=3.0.2 in c:\progra~1\qgis3~1.14\apps\python37\lib\si
te-packages (from requests->folium>=0.6.0->arosics) (3.0.4)
Requirement already satisfied: idna<3,>=2.5 in c:\progra~1\qgis3~1.14\apps\python37\lib\site-p
ackages (from requests->folium>=0.6.0->arosics) (2.9)
Requirement already satisfied: MarkupSafe>=0.23 in c:\progra~1\qgis3~1.14\apps\python37\lib\si
te-packages (from jinja2>=2.9->folium>=0.6.0->arosics) (1.1.1)
Requirement already satisfied: setuptools in c:\progra~1\qgis3~1.14\apps\python37\lib\site-pac
kages (from kiwisolver>=1.0.1->matplotlib->arosics) (45.2.0)
Requirement already satisfied: pyyaml in c:\progra~1\qgis3~1.14\apps\python37\lib\site-package
s (from dask>=0.15.0->geopandas>=0.8.17->arosics) (5.3.1)

SUCCESS: Specified value was saved.

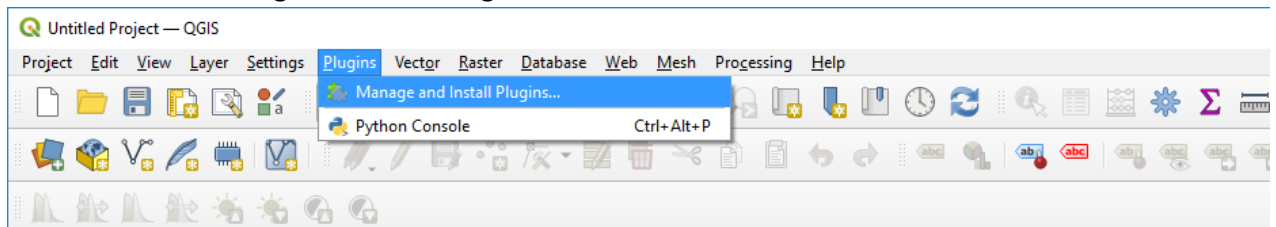
SUCCESS: Specified value was saved.

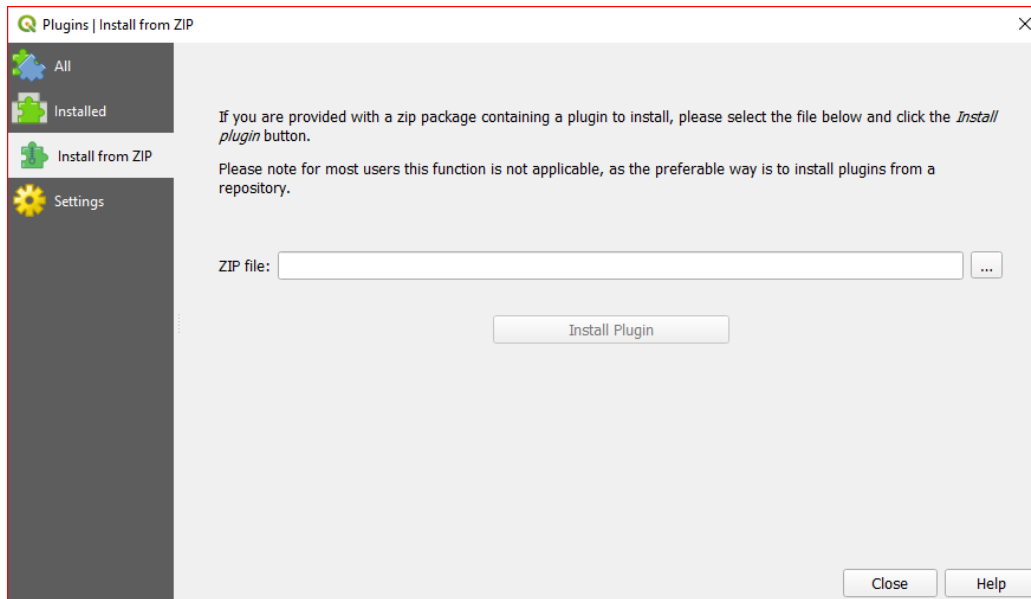
SUCCESS: Specified value was saved.
Press any key to continue . . .
```

If the package installation was successful, you can close the shell. The required packages are installed now and you can continue to start/install the AVHYAS-plugin.

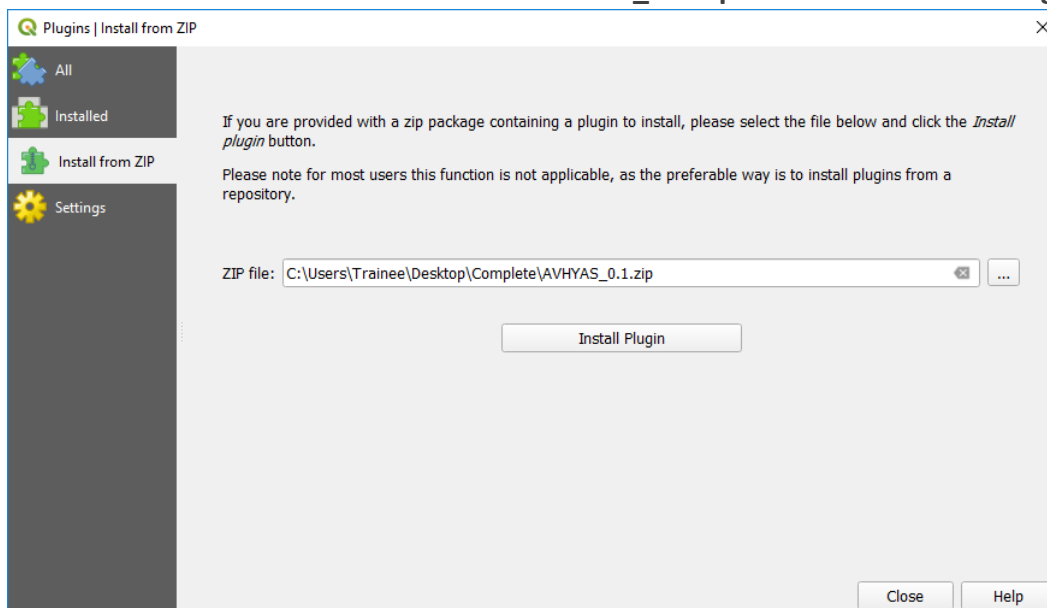
3. Install the AVHYAS-PLUGIN

- I. Start **QGIS**
- II. Click on **QGIS -> Manage and Install Plugins -> Install from ZIP**





III. Press the browse button and select the **AVHYAS_0.1.zip** file and click **Install Plugin**



IV. On successful installation a menu will appear in QGIS by the name Hyperspectral like the one shown in the image below.

