

TROUBLE SHOOTING: Conflict Between ArcGIS Pro's Deep Learning Package and Google's geemap

ArcGIS Pro's Deep Learning package has a known conflict with certain open-source Python packages such as geemap. A series of tests indicate these python packages cannot co-exist within one Python environment. If your computer's python environment contains any Esri Deep Learning package you will need to address this issue prior to using geemap in ArcGIS Pro.

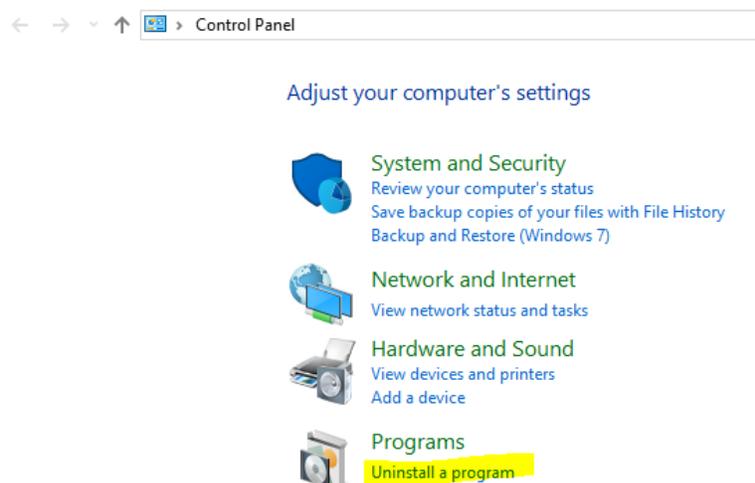
The ArcGIS Pro Deep Learning package is available from their GitHub repository (<https://github.com/Esri/deep-learning-frameworks>). Normally, it is installed within your default Python environment. We will manually uninstall it and then install other packages. If you wish to use the Deep Learning libraries in the future as well as the geemap packages, you can do so by using cloned environments. One clone will include geemap and another will include the Deep Learning package. You can switch python environments within ArcGIS Pro.

Please see https://giscenter.isu.edu/pdf/PDF_NASA_RECOVER2/CloningDeepLearningEnvironment.pdf if you are interested in setting up a separate python environment for the ArcGIS Deep Learning Package.

Let's get started:

Part 1. Uninstall the ArcGIS Pro deep learning package using the Control Panel

1. Go to the Windows search box , and type **control panel**
2. From the Control Panel go to Programs -- Uninstall a program.



3. Scroll through the list of installed programs and find **ArcGIS Pro Deep Learning**,
4. Right click the item and select **Uninstall/Change**.
5. Follow the prompts to remove this software.

Part 2. Clean up a Problematic Clone Python Environment

There are cases where you may have already cloned the default Python environment containing the Deep Learning packages. This will also interfere with geemap if we build upon such an environment. Use the following steps to perform a clean remove of the problematic environment.

6. Go to  Start – ArcGIS – Python Command Prompt (right click) – More – Run as administrator (you may need to type in your administrator password)

When the python prompt appears, type the command `conda env list` and press ENTER

7. You should see something like the following screen (HINT: screen capture this as we will refer to the environments later).

```
(arcgispro-py3_clone) C:\Users\Di\AppData\Local\ESRI\conda\envs\arcgispro-py3_clone>conda env list
# conda environments:
#
base                C:\Program Files\ArcGIS\Pro\bin\Python
arcgispro-py3       C:\Program Files\ArcGIS\Pro\bin\Python\envs\arcgispro-py3
arcgispro-py3_clone * C:\Users\Di\AppData\Local\ESRI\conda\envs\arcgispro-py3_clone
arcgispro_py3_dl    C:\Users\Di\AppData\Local\ESRI\conda\envs\arcgispro_py3_dl
```

Use your environment list to help identify which clone environment you want to remove.

8. Make sure the active environment is the ArcGIS Pro default environment. If you are not sure, you can use the following command `proswap arcgispro-py3`.

Now the active environment should be `arcgispro-py3`.

9. To remove the clone environment using a Deep Learning package (e.g., `arcgispro-py3_clone`), use the command `conda remove --name arcgispro-py3_clone -all`
10. Press ENTER
11. Type in “y” (yes) if prompt.

Wait just a few minutes until the removal process is finished.

12. Next, type `conda env list` again at the Python command prompt to make sure the `arcgispro-py3_clone` is NOT shown in the environment list.
13. Go to the screen capture we saved earlier.
 - a. Find the directory (folder) corresponding to the cloned environment.
 - b. Using Windows File Manager, navigate to this location (C:\Users\[YOUR USERNAME]\AppData\Local\ESRI\conda\envs\).
 - c. If this folder still contains an `arcgispro-py3_clone` folder, select it and delete it.

Your computer is now clean and ready to get a fresh start making a new clone environment to support `geemap`.

NOTE: Please see

https://giscenter.isu.edu/pdf/PDF_NASA_RECOVER2/CloningDeepLearningEnvironment.pdf if you are interested in setting up a separate python environment for the ArcGIS Deep Learning Package.