



Note on Creating the CalmAn Environment on Windows

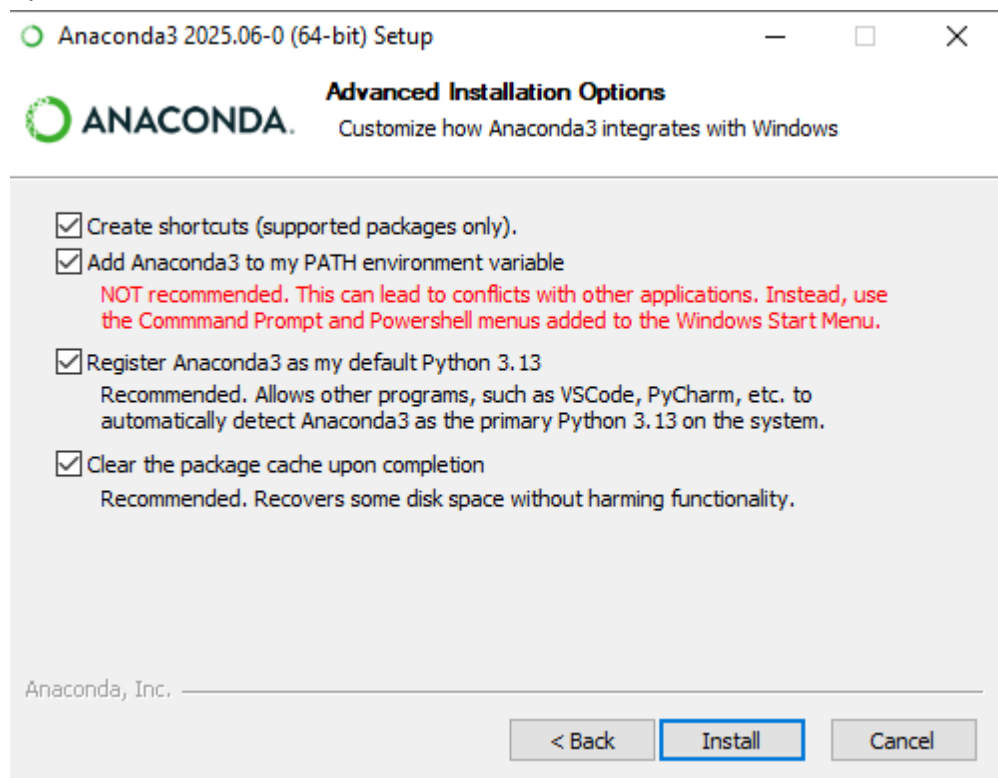
Last updated: 2026.02.26.

The goal of this document is to provide a step-by-step guide for installing CalmAn (1.11.4.-1.13.1) on a Windows PC. A Windows 10 or 11 system is required, with at least a few gigabytes of free space on the C: drive. We assume that no programming tools have been installed on the system before. Instructions may change with future software releases.

Installing the Anaconda Distribution:

The Anaconda Distribution includes the Anaconda Prompt, a command-line interface that provides direct access to the conda package manager and makes it easy to create and manage environments.

- Installation steps:
 1. Download the installer from the following link:
<https://www.anaconda.com/download/success>
 2. Launch the installer and follow the on-screen instructions; Select all options here:





- The installer will create a folder named `anaconda3` inside your user directory (typically `C:\Users\<username>\`). All environments and setting files will be placed in this folder.

Installing Mamba

Mamba is a faster drop-in replacement for conda, but it is not included in the Anaconda Distribution by default.

- Open the **Anaconda Prompt** with the "Run as administrator" option and then copy and run the following command:
`conda install mamba -n base -c conda-forge`
(When prompted for confirmation, type **y** and press Enter to continue.)

Creating the CalmAn Environment and Installing the CalmAn Package

Pluvianus depends on CalmAn and uses its function to handle CalmAn data.

- In the **Anaconda Prompt** opened in the previous step, run the following command:
`mamba create -n caiman -c conda-forge caiman`
(When prompted for confirmation, type **y** and press Enter to continue. About 1GB will be downloaded, might take over an hour on lower profile machines)
- Activate the newly created environment:
`conda activate caiman`
- Tensorflow related fix:
 - CalmAn 1.13.0. – 1.13.1. No need for this step (2026-02-26).
 - CalmAn 1.11.4. Replace the packages that cause the TensorFlow-related `evaluate_components` command (cell 28 of the `demo_pipeline` notebook) to fail. (Checked on 2025-09-23)
`conda remove llvm-openmp -y`
- To install manager for downloading the demo datasets, run:
`caimanmanager install`
This will create a folder named **caiman_data** in your user folder. The terminal output will display the exact location of this folder.

```
(caiman) C:\Windows\system32>caimanmanager install
C:\Users\User\anaconda3\envs\caiman\lib\site-packages\caiman\_init_.py:3: UserWarning: pkg_resources is deprecated as an API. See https://setuptools.pypa.io/en/latest/pkg_resources.html. The pkg_resources package is slated for removal as early as 2025-11-30. Refrain from using this package or pin to Setuptools<81.
  import pkg_resources
Did not use editable fallback
Installed C:\Users\User\caiman_data
```

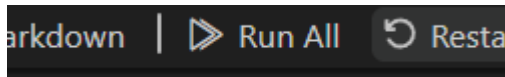


Running the CalmAn Demo to Create Sample Result

Demo notebook in VS Code

We will use VS Code to run the CalmAn demo notebook, to generate the demo data files that can be opened with Pluvianus.

- Download Visual Studio Code from:
<https://code.visualstudio.com/>
- Install VS Code. Run VS Code, skip the tutorials.
- Open the following file from the caiman_data folder:
`caiman_data\demos\notebooks\demo_pipeline.ipynb`
- Click **Run All** in the notebook.

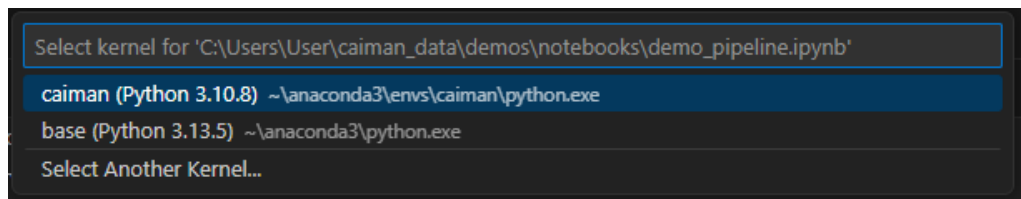


This will trigger some configuration steps displayed in the command bar at the top:

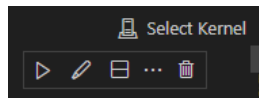
- **Installing necessary extensions:** When prompted, allow the installation of the Python and Jupyter extensions. Wait until their installation is complete, as indicated by the notification bubbles in the lower-right corner. This step can be performed also in the extensions tab.



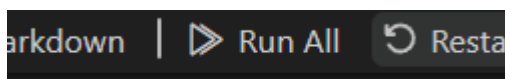
- **Selecting environment/kernel:** Choose the caiman environment as the kernel:



This step can be performed also by selecting kernel selector icon in the upper-right corner of the notebook.



- If prompted for permission, allow both Public and Private network access.
- You can now run the entire notebook.



- You can skip the videos appearing with the **q** button.



- During execution, the demo will download data files (approx. 340 MB) to `C:\Users\<YourUser>\caiman_data\example_movies\` and process them into temporary .mmap files (approx. 340 MB) into: `C:\Users\<YourUser>\caiman_data\temp\`
- Your output is the `demo_pipeline_results.hdf5`

Running command line demos

Alternatively, you can call the demo calculations from the Anaconda Prompt by:

```
python caiman_data/demos/general/demo_pipeline.py --no_play --cluster_backend single
```

This will create usable .hdf5 and .mmap files in the caiman_data folder.

Installing Pluvianus

Now we install and run Pluvianus from the distribution according to the README file.

- In the Anaconda Prompt opened in the previous step (if you happen to have Anaconda Prompt restarted, have the caiman environment activated first with `conda activate caiman`), run the following command:
`pip install pluvianus`
- To launch **Pluvianus**, run the following command:
`pluvianus`

Opening the demo files

Continue according to the README online:

<https://github.com/katonage/pluvianus/blob/main/docs/Usage.md#opening-demo-files>