



Note on Creating the CalmAn Environment on macOS

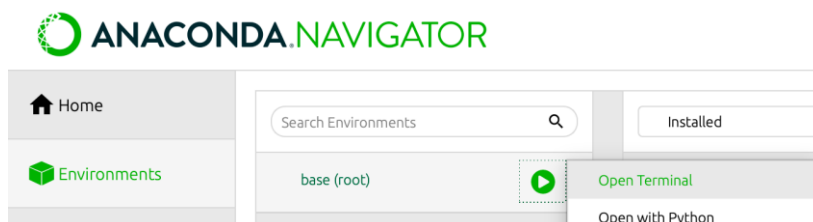
Last updated: 2026.03.03.

The goal of this document is to provide a step-by-step guide for installing CalmAn (1.13.1) on a macOS system. MacOS 13 or higher is required, with at least a few gigabytes of free space. 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 Python interpreter and the Conda package manager that are accessible from terminal after the installation.

- Installation steps:
 1. Download the (64-bit graphical) installer from the following link:
<https://www.anaconda.com/download/success>
 2. Launch the installer and follow the on-screen instructions.
- The installer will create a folder named `anaconda3` (either `/opt/anaconda3/` or `/Users/<username>/`). Python environments will be placed in this folder.
- Restart the system.
- Open Anaconda Navigator and run Terminal:



Installing Mamba

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

- In the Terminal run the following command (in the base environment):
`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 Terminal 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
```

- To install manager for downloading the demo datasets, run (in the caiman environment):

```
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.

```
(base) ~ % conda activate caiman
(caiman) ~ % caimanmanager install
Matplotlib is building the font cache; this may take a moment.
Did not use editable fallback
Installed /Users/ /caiman_data
```

- Numba related fix on macOS: In some systems installing pluvianus fails because Numba (0.64. pulled by pip install pluvianus) is not compiled, and pip wheel compile process fails. Appears on CalmAn 1.13.1, 2026-03-01. Problem may vanish with newer numba releases. If problem arises, try installing compiled numba package from conda-forge:

```
mamba install -c conda-forge "numba=0.63.*"
```

Running the CalmAn Demo to Create Sample Result

Run the CalmAn demo calculations from the Terminal by:

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

During execution, the demo will download data files (approx. 340 MB) to `~/caiman_data/example_movies/` and process them into temporary mmap files (approx. 340 MB) into: `~/caiman_data/temp/`

This will create sample analysis file

`memmap_d1_170_d2_170_d3_1_order_C_frames_3000.hdf5` and related movement corrected movie file (.mmap) in the caiman_data folder.

Installing Pluvianus

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

- In the Terminal opened in the previous step (if you happen to have Terminal 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>