

Getting started with PAROS

This is an opinionated guide for running PAROS locally on a PC. Installation of Python and all dependencies will be done using [uv](#), a Python package and project manager. None of the steps in this guide require admin rights, unless your institution has very restrictive software installation policies.

! Important

This guide involves running commands in a terminal. If available on your system, use the Windows Terminal app. If that app is not installed, use PowerShell.

1 Install uv

i Note

If none of the methods listed below work, check [uv's installation page](https://docs.astral.sh/uv/getting-started/installation/#installation-methods): <https://docs.astral.sh/uv/getting-started/installation/#installation-methods>

1.1 Standalone installer

Run this command in a terminal:

```
powershell -ExecutionPolicy Bypass -c "irm https://astral.sh/uv/install.ps1 | iex"
```

Your institution may not allow running PowerShell scripts. In that case, try the method below.

1.2 Using winget

WinGet is a package manager for Windows that is pre-installed on most PCs. Run the command below in a terminal to install uv:

```
winget install -e --id astral-sh.uv
```

Then close the terminal and open it again (this is necessary to make the terminal aware of the newly installed program), and run this command:

```
uv tool update-shell
```

2 Install Python

If you didn't install Python already, run this command to install Python:

```
uv python install 3.12
```

3 Download or clone PAROS

Open a terminal in the folder where you would like to download PAROS and clone PAROS with Git:

```
git clone https://github.com/MREYE-LUMC/PAROS.git
```

If you don't have Git installed, download PAROS from the GitHub repository at <https://github.com/mreye-lumc/paros> [direct download link]

4 Install all dependencies

Switch to the PAROS directory (if you cloned PAROS using Git, `cd paros` should work). Install PAROS and its dependencies with uv:

```
uv sync
```

This creates a new [virtual environment](#) and installs the packages required to run PAROS. You'll see a new `.venv` directory is created in the PAROS directory; this is where uv puts the virtual environment.

5 Open the notebook

The example notebooks can be run in Jupyter Lab. To start Jupyter Lab, run

```
uv run jupyter lab
```

Make sure you run this command in the directory where you downloaded PAROS. When Jupyter Lab has started, you can navigate to the notebooks in the `examples` folder.

Alternatively, you can first activate the virtual environment and then run Jupyter Lab:

```
.venv/Scripts/activate  
jupyter lab
```

6 Creating your own project with PAROS

It is recommended to create new projects using PAROS in a separate directory. A new project can be initialized with `uv init`:

```
uv init my-paros-project # Choose your own project name here
```

Then, move to the `my-paros-project` folder and add PAROS as a dependency:

```
uv add PAROS
```

This will download PAROS from the [Python Package Index](#) and add it as a dependency to `pyproject.toml`.