
proatac Documentation

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CHAPTER 1

About

proatac is an open-source command-line toolkit that performs robust and scalable preprocessing of **ATAC-Seq** data. Specifically, we've implemented our workflow using



Install stable version through PyPi

There are a few [dependencies](#) needed to get **proatac** to run. All are very common bioinformatics tools / languages and should be readily available in most systems. However, **note that the current implementation of proatac is not supported on Windows platforms.**

Depending on your python environment, we generally recommend using a virtual environment to keep python dependencies tidy. An example of installing **proatac** inside a new python virtual environment called `venv3` using the following sequence of commands–

```
python3 -m venv venv3
source venv3/bin/active
pip3 install proatac
```

Install via GitHub

Though **not recommended**, a bleeding-edge (development) version can be installed directly from Git. Again using a virtual environment–

```
python3 -m venv venv3
source venv3/bin/active
pip3 install git+ssh://git@github.com/buenrostrolab/search/tree/master/proatac
```

While installing **proatac** is obviously a great first step, make sure that all of the [dependencies](#) are met. Check out the next page for more detail.

Getting proatac running

proatac has a few dependencies that are listed below with relevant hyperlinks for installation instructions from the source. To quickly determine what may be lacking in your system, try running **proatac** with the default.yaml file (more on that *here*) using the `--check` flag. To do this, we'll first clone the repository

```
git clone https://github.com/buenrostrolab/proatac.git
proatac yaml/default --check
```

If you get a message saying that the check was succesful, then you're most likely ready to begin analyzing data. However, if you run into one or more error messages, you are likely missing the necessarily software. Make sure that

- [bedtools](#)
- [bowtie2](#) and relevant index for analysis.
- [java language](#)
- [macs2](#)

We note that macs2 though also a PyPi package is only compatible with Python 2.7 whereas **proatac** is a Python 3 package. There's a good chance that macs2 is already living in your environment if you are reading this help page, which can be tested using the following–

```
which macs2
```

and hopefully seeing a valid path. If not, one solution for macs2 install is to create a separate python2 virtual environment using the following commands –

```
python2 -m venv venv2
source venv2/bin/active

pip install numpy
pip install wheel
pip install macs2
```

- R language and package dependencies (see [wiki/Rpackages](#) for more information).
- samtools

CHAPTER 4

Revisions

Revision history

Maybe **bold** *this* will work?

New header?

two

three

four

CHAPTER 5

Author

The primary developer is Caleb Lareau in the Buenrostro Lab.

CHAPTER 6

Citation

If you use **proatac** in your research, please cite our tool at the following URL:

<http://buenrostrolab.com/proatac>

CHAPTER 7

Bugs / Errors

Please let us know if you find any errors/inconsistencies in the documentation or code by filing a new [Github Issue](#).