

cnvCall

This manual is currently incomplete, for help with cnvCall, please email niallc@gmail.com. To run cnvCall you will need access to, and some familiarity with the programming language *R*.

Installation

I'd recommend creating/having a directory that you can write to that you install all your R packages in - I'll refer to that as `yourDirectoryForRpackages` in all that follows.

Having created that directory it can be helpful to tell R about that directory (if you haven't already done this), I find the easiest way to do this is to create/edit your `.Rprofile` file (which lives in your home space, I'm not sure of the details if you're using windows), making sure it contains the line:

```
.libPaths(yourDirectoryForRpackages)
```

Then, at the command line, in a directory containing the package the file: `cnvCall_0.2.tar.gz`

```
R CMD INSTALL cnvCall_0.2.tar.gz --library=yourDirectoryForRpackages
```

If you don't like the command line, you can use the `install.packages` function within R, probably using a line like:

```
install.packages("cnvCall_0.2.tar.gz", type="source", repos=NULL)
```

If `cnvCall_0.2.tar.gz` is not in the working directory of that R session (you can check this using `getwd()`), then you'll need to supply the full path to the file.

You might not have the requisite packages installed. The `install.packages` function within R should handle this, if not hopefully you will get messages explaining which packages you need to install and can then install them by hand.

Suppose it tells you that you need the package "MCMCpack" (and if you don't have it it will) then you can do: `install.packages("MCMCpack", lib=yourDirectoryForRpackages)`

If it needs others then you can install those in the same way.

Running cnvCall

Open R, and if you've set up that repository in a place that R knows about then you should be able to do load the package using: `library(cnvCall)` If you have placed `cnvCall` in a location that R doesn't know about: `someDirectory`, then you can do: `library(cnvCall, lib.loc = someDirectory)`

The primary function intended for running `cnvCall` is: `simple_call`. For details read the help for `simple_call` by entering:

```
?simple\_call
```

in R.

Towards the bottom of that help there's a runnable example, which I give below.

```
Runnable code for cnvCall
  data_matrix = matrix(rnorm(1e5), ncol=10)
  data_matrix = rbind(data_matrix, matrix(rnorm(1e5, mean=3,
sd=1.4), ncol=10))
  rownames(data_matrix) = paste("ind" , 1:nrow(data_matrix), sep="")
  colnames(data_matrix) = paste("prob", 1:ncol(data_matrix), sep="")

  arguments = set_arguments(write_results=F, quick=F, nocls=5:1,
cnvs=1, collections="coll_1")
  arguments$hier_mchoice_iters = 1:100
  arguments$probe_summary      = "pca" # or you could use: "t8" "mean"
  arguments$signal_model       = "normal" # or you could use: "t8"

  qcallrv=simple_call(data_matrix=data_matrix, simpleArguments = arguments)
```