

# Package: morpheus (via r-universe)

October 19, 2026

**Encoding** UTF-8

**Title** Estimate Parameters of Mixtures of Logistic Regressions

**Description** Mixture of logistic regressions parameters (H)estimation with (U)spectral methods. The main methods take d-dimensional inputs and a vector of binary outputs, and return parameters according to the GLMs mixture model (General Linear Model). For more details see chapter 3 in the PhD thesis of Mor-Absa Loum: <https://theses.fr/2018SACLS299>, available here <https://theses.hal.science/tel-01877796/document>.

**Version** 1.0-6

**Depends** R (>= 3.5.0),

**Imports** MASS, jointDiag, methods, pracma, utils

**Suggests** devtools, flexmix, parallel, testthat (>= 3.0.0), roxygen2

**License** MIT + file LICENSE

**Date** 2026-04-22

**URL** <https://github.com/yagu0/morpheus>

**Collate** 'utils.R' 'A\_NAMESPACES.R' 'computeMu.R' 'multiRun.R' 'optimParams.R' 'plot.R' 'sampleIO.R'

**Config/testthat/edition** 3

**Repository** <https://yagu0.r-universe.dev>

**Date/Publication** 2026-10-19 06:12:15 UTC

**RemoteUrl** <https://github.com/yagu0/morpheus>

**RemoteRef** HEAD

**RemoteSha** b06411413a795271c1bb65369760ae113d878870

**RemoteSubdir** pkg

## Contents

|                            |   |
|----------------------------|---|
| morpheus-package . . . . . | 2 |
| Index                      | 3 |

**Description**

Mixture of logistic regressions parameters (H)estimation with (U)spectral methods. The main methods take  $d$ -dimensional inputs and a vector of binary outputs, and return parameters according to the GLMs mixture model (General Linear Model). For more details see chapter 3 in the PhD thesis of Mor-Absa Loum: <<https://theses.fr/2018SACLS299>>, available here <<https://theses.hal.science/tel-01877796/document>>.

**Details**

The package devtools should be useful in development stage, since we rely on testthat for unit tests, and roxygen2 for documentation. knitr is used to generate the package vignette. jointDiag allows to solve a joint diagonalization problem, providing a more robust solution compared to a single diagonalization. Concerning the other suggested packages:

- tensor is used for comparing to some reference functions initially coded in R; it should not be required in further package versions;
- parallel (generally) permits to run the bootstrap method faster.

The two main functions are located in R/computeMu.R and R/optimParams.R:

- computeMu(): estimation of parameters directions;
- optimParams(): builds an object o to estimate all other parameters when calling o\$run(), starting from the directions obtained by previous function

See also multiRun(), which is a flexible method to run Monte-Carlo or bootstrap estimations using different models in various contexts.

**Author(s)**

Benjamin Auder [aut, cre], Mor-Absa Loum [aut]

Maintainer: Benjamin Auder <[benjamin.auder@universite-paris-saclay.fr](mailto:benjamin.auder@universite-paris-saclay.fr)>

# Index

morpheus (morpheus-package), [2](#)  
morpheus-package, [2](#)