

Data Dictionary for Ðäá\á Directory

This document provides detailed descriptions of the files included in the /data directory of the GitHub repository <https://github.com/likun-stat/XVAE>, to support reproducibility of the analyses presented in the manuscript. All files are in R's .rda binary format and are intended to be loaded using R.

example_X.rda

```
HmdYKÁÜä { ~|æc^âÄæ!cä-ä&äæ|DÄâæææ
Ö^>^!æc^âÄ^KAEDÜä { ~|æcä[ }ÄÜc~â^ÐCE~c[äâ~', 'c[!&@Ä[ ]cä { DEÜÉÄ&[!|!^•}[ ]äâ} *Äc[ÄT[ä^|ÄQQQÄä}Äc@^Ä
{æ}~•&!ä]cÈ
7cbhYbhgK
- x: G€€€Ä ÄF€€Ä}~ { ^!ä&Ä { æc!äæÉÄÜ [ , •Ä!^!|!^•^}cÄ•]æcäæ|Ä| [&æcä[ ]•LÄ&[|~ { }•Ä!^!|!^•^}cÄ•ä { ~|æc^âÄcä { ^
!^|ä&æc^•È
- stations: G€€€Ä ÄGÄâææÄ-!æ { ^ÉÄÖ^[*!æ]@ä&Ä&[!|äâ}æc^•Ä[ ]} *äc~ä^ÉÄ|æcäc~ä^Ää}Äâ^!|!^•DÄ-[!Ä^æ&@
[!&æcä[ ]Ää} x.
```

Wcdi`Ug.rda

```
HmdYKÁÜä { ~|æc^âÄæ!cä-ä&äæ|DÄâææÄ-[!Ä^ { ~|æcä[ ]Ä&[ { ]æ!ä•[ ]
Ö^>^!æc^âÄ^KAEDÜä { ~|æcä[ }ÄÜc~â^ÐCE~c[äâ~', 'c[!&@'Ø|^æ'cä { ^'^æcÖEP'&[ { ]ÈÜÉÄ&[!|!^•}[ ]äâ} *Äc[ÄT[ä^|ÄQQQÄä}Äc@^Ä
{æ}~•&!ä]cÄä~cÄ, äc@Ä-^, ^!Ä| [&æcä[ ]•Äc[Äæ&&[ { { [äæc^Äc@^Ä|ä { äc^âÄ] [ , ^!Ä[-Ä^æcÖEPÈ
7cbhYbhgK
- U_sim_grid: l|ÈÄ Äl|€€ÄâææÄ-!æ { ^Ä[-Ä•ä { ~|æc^âÄâææÄÇ~}ä-[! { Ä•&æ|^D.
- U_xvae_grid: l|ÈÄ Äl|€€ÄâææÄ-!æ { ^Ä[-ÄYXÖÈ^ { ~|æc^âÄâææÄÇ~}ä-[! { Ä•&æ|^D.
- U_gan_grid: l|ÈÄ Äl|€€ÄâææÄ-!æ { ^Ä[-Ä^æcÖEPÈ^ { ~|æc^âÄâææÄÇ~}ä-[! { Ä•&æ|^D.
- stations_grid: G€€€Ä ÄGÄâææÄ-!æ { ^ÉÄÖ^[*!æ]@ä&Ä&[!|äâ}æc^•Ä[ ]} *äc~ä^ÉÄ|æcäc~ä^DÄ-[!Ä^æ&@Ä| [&æcä[ ]^È
```

mon_max_allsites.rda

```
HmdYKÁÜ^æ|Ä[ä•^!ç^âÄâæææ
7cbhYbhgK
- mon_max_allsites: FÎÏ€HÄ ÄHÏGÄâææÄ-!æ { ^ÉÄÜ [ , •ÄMÄ| [&æcä[ ]•ÉÄ&[|~ { }•ÄMÄ { [ ]c@|^Ä { æç
^ { ]^!æc~!^•ÄÇ»ÖDÄ[ç^!ÄHFÄ^!æ!•.
```

new_loc.rda

```
HmdYKÁÜ^æ|Ä[ä•^!ç^âÄâææÄÇ| [&æcä[ ]Ä { ^æâæææD
7cbhYbhgK
- new_loc: FÎÏ€HÄ ÄGÄâææÄ-!æ { ^ÉÄŠ[ ]} *äc~ä^Äæ}äÄ|æcäc~ä^ÄÇä^!|!^•DÄ-[!Ä| [&æcä[ ]•Ää}
mon_max_allsites.
```

fitted_gev_par.rda

```
HmdYKÁÜ^æ|Ä[ä•^!ç^âÄâææÄÇ-äcc^âÄ { [ä^|Ä]æ!æ { ^c^!•D
7cbhYbhgK
- fitted_gev_par: FÎÏ€HÄ Äl|ÄâææÄ-!æ { ^ÉÄÖæ&@Ä| [ , Ä&[!|!^•}[ ]ä•Äc[ÄæÄ| [&æcä[ ]ÉÄ, äc@Ä&[|~ { }•K
FÈ Location: ÖÖXÄ| [&æcä[ ]Ä]æ!æ { ^c^!ÄÇ»ÖD
GÈ Scale: ÖÖXÄ•&æ|^Ä]æ!æ { ^c^!ÄÇ»ÖD
ŠÈ Shape: ÖÖXÄ•@æ|^Ä]æ!æ { ^c^!ÄÇ~}äc|^••D
HÈ P-value: Ö@È•~~æ!^äâ*[[ä]•••È[-È-äcÄc^•cÄ]Èçæ|^ÄÇ~}äc|^••ÉÄà^c, ^^}Ä€Äæ}äÄFD
```

Notes:

- All .rda files are in R's native binary format and can be loaded using the `load()` function.
- Artificial data sets were generated independently and used for validation or emulation method comparison.
- Real datasets were used in the manuscript's application and model validation sections.