

Useful R Resources

Irucka Embry, E.I.T. (EcoC²S)

2023-09-26

Document Containing Various Resources and Usage of R data

I finished compiling this document today which uses some data sets from my `iemisdata` package:

https://www.ecoccs.com/global_fate-transport-exposure.pdf

Global Transport, Fate & Exposure to Various Ecological Pollutants

R Tutorials

The following link contains my past R Tutorials:

<https://www.ecoccs.com/rtraining.html#tut>

EcoC²S [Irucka Embry): R Trainings and Resources provided by EcoC²S (Irucka Embry, E.I.T.): **Irucka Embry's Previous R Trainings for his Tennessee State University (TSU) & USGS Colleagues And TSU Freshman Engineering Students**

R Examples

The following link contains problems that I have solved using R:

<https://www.ecoccs.com/rtraining.html#examp>

EcoC²S [Irucka Embry): R Trainings and Resources provided by EcoC²S (Irucka Embry, E.I.T.): **Irucka Embry's R Examples**

R Packages

If you want to install the R packages that are described below, you can use the following R code:

```
install.packages(c("chem.databases", "ie2misc", "ie2miscdata", "iemisc", "iemiscdata"))
```

The following link contains both the CRAN and GitLab Repositories for my R packages:

<https://www.ecoccs.com/rtraining.html#repos>

EcoC²S [Irucka Embry): R Trainings and Resources provided by EcoC²S (Irucka Embry, E.I.T.): **Irucka Embry's R Contributions [Questions and Answers on Stack Overflow, R Packages, & R Contributions to Existing Projects]**

<https://CRAN.R-project.org/package=iemisc>

`iemisc`: Irucka Embry's Miscellaneous Functions

A collection of Irucka Embry's miscellaneous functions (Engineering Economics, Civil & Environmental/Water Resources Engineering, Construction Measurements, GNU Octave compatible functions, Python compatible function, Trigonometric functions in degrees and function in radians, Geometry, Statistics, Mortality Calculators, Quick Search, etc.).

<https://CRAN.R-project.org/package=iemisdata>

`iemisdata`: Irucka Embry's Miscellaneous Data Collection

Miscellaneous data sets [Chemistry, Engineering Economics, Environmental/Water Resources Engineering, Nuclear Accidents, US Presidential Elections, and US Continental Congress Presidents].

<https://CRAN.R-project.org/package=ie2misc>

`ie2misc`: Irucka Embry's Miscellaneous USGS Functions

A collection of Irucka Embry's miscellaneous USGS functions (processing .exp and .psf files, statistical error functions, "+" dyadic operator for use with NA, creating ADAPS and QW spreadsheet files, calculating saturated enthalpy). Irucka created these functions while a Cherokee Nation Technology Solutions (CNTS) United States Geological Survey (USGS) Contractor and/or USGS employee.

<https://CRAN.R-project.org/package=ie2miscdata>

`ie2miscdata`: Irucka Embry's Miscellaneous USGS Data Collection

A collection of Irucka Embry's miscellaneous USGS data sets (USGS Parameter codes with fixed values, USGS global time zone codes, and US Air Force Global Engineering Weather Data). Irucka created these data sets while a Cherokee Nation Technology Solutions (CNTS) United States Geological Survey (USGS) Contractor and/or USGS employee.

<https://CRAN.R-project.org/package=chem.databases>

`chem.databases`: Collection of 3 Chemical Databases from Public Sources

Contains the Multi-Species Acute Toxicity Database (CAS & SMILES columns only) [United States (US) Department of Health and Human Services (DHHS) National Institutes of Health (NIH) National Cancer Institute (NCI), "Multi-Species Acute Toxicity Database", <https://cactus.nci.nih.gov/download/acute-toxicity-db/>] combined with the Toxic Substances Control Act (TSCA) Inventory [United States Environmental Protection Agency (US EPA), "Toxic Substances Control Act (TSCA) Chemical Substance Inventory", <https://www.epa.gov/tsca-inventory/how-access-tsca-inventory>] and <https://cdxapps.epa.gov/oms-substance-registry-services/substance-list-details/169>] and the Agency for Toxic Substances and Disease Registry (ATSDR) Database [United States (US) Department of Health and Human Services (DHHS) Centers for Disease Control and Prevention (CDC)/Agency for Toxic Substances and Disease Registry (ATSDR), "Agency for Toxic Substances and Disease Registry (ATSDR) Database", <https://cdxapps.epa.gov/oms-substance-registry-services/substance-list-details/105>] in 2 data sets. One data set has a focus on the latter 2 databases and one data set focuses on the former database. Also contains the collection of chemical data from Wikipedia compiled in the US EPA CompTox Chemicals Dashboard [United States Environmental Protection Agency (US EPA) / Wikimedia Foundation, Inc. "CompTox Chemicals Dashboard v2.2.1", <https://comptox.epa.gov/dashboard/chemical-lists/WIKIPEDIA>].