

Package: HawaSpatial (via r-universe)

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Type Package

Title Holistic and Areal Weighted Analysis for Global Development

Version 0.1.10

Author Abdisalam Hassan Muse [aut, cre] (ORCID:
<<https://orcid.org/0000-0003-4905-0044>>)

Maintainer Abdisalam Hassan Muse <abdisalam.hassan@amoud.edu.so>

Description Provides a 'shiny'-based platform for sub-national monitoring of global development indicators using large-scale household surveys. The package supports the Demographic and Health Surveys, Multiple Indicator Cluster Surveys, Malaria Indicator Surveys, Integrated Household Budget Surveys, Service Provision Assessment surveys, and Living Standards Measurement Study surveys. It provides workflows for descriptive, diagnostic, predictive, and prescriptive spatial analytics, including a spatial equalizer for survey-shapefile integration, exploratory spatial data analysis, area-level small area estimation, spatial autoregressive and spatial error models, hierarchical multilevel models, spatial inequality metrics, spatial and temporal decomposition, and publication-ready reporting. The implemented methods are described in <[doi:10.1111/j.1538-4632.1995.tb00338.x](https://doi.org/10.1111/j.1538-4632.1995.tb00338.x)>, <[doi:10.1007/s11749-018-0599-x](https://doi.org/10.1007/s11749-018-0599-x)>, and the reference identified by <isbn:9781118735787>. The software has been cited in applied geographic and multilevel health studies, including studies of arthritis resource allocation <[doi:10.1016/j.jorep.2026.101000](https://doi.org/10.1016/j.jorep.2026.101000)> and childhood stunting priorities <[doi:10.1016/j.nutos.2026.100660](https://doi.org/10.1016/j.nutos.2026.100660)>.

License GPL (>= 3)

Encoding UTF-8

RoxygenNote 7.3.3

Depends R (>= 4.2.0)

Imports shiny

Suggests biscale, broom, broom.mixed, bs4Dash, classInt, corplot, cowplot, dplyr, ggplot2, ggrepel, glmmTMB, gstat, haven, ineq, knitr, lme4, magrittr, performance, purrr, RColorBrewer, readr, rmarkdown, sae, scales, sf, spatialreg, spdep, stringr, survey, testthat (>= 3.0.0), tidyr, tidyselect, tidyverse, viridis

Config/testthat/edition 3

URL <https://github.com/Abdisalammuse/HawaSpatial>

BugReports <https://github.com/Abdisalammuse/HawaSpatial/issues>

NeedsCompilation no

Repository <https://cran.r-universe.dev>

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hawaspatial_example_files
<i>Locate HawaSpatial example files</i>

Description

Returns installed paths to example datasets and shapefile archives included with the package.

Usage

hawaspatial_example_files()

Value

A data frame with columns example, description, and path.

Examples

```
files <- hawaspatial_example_files()
head(files)
```

`load_hawaspatial_state`*Load a HawaSpatial project state*

Description

Loads a structured project-state file saved by `save_hawaspatial_state()`.

Usage

```
load_hawaspatial_state(file)
```

Arguments

`file` Path to the .rds state file.

Value

A named list containing the saved workflow settings and metadata.

Examples

```
st <- list(indicator = "food_security", admin_level = "region")
f <- tempfile(fileext = ".rds")
save_hawaspatial_state(st, f)
load_hawaspatial_state(f)
```

`run_app`*Run the HawaSpatial Shiny application*

Description

Launches the HawaSpatial Shiny application for sub-national monitoring of development indicators using survey data and administrative shapefiles.

Usage

```
run_app(...)
```

```
run_hawaspatial(...)
```

Arguments

`...` Additional arguments passed to `shiny::runApp()`.

Value

No return value. Called for the side effect of launching the Shiny application in an interactive R session.

Examples

```
if (interactive()) {  
  run_app()  
}
```

save_hawaspatial_state

Save a HawaSpatial project state

Description

Saves a structured list of workflow settings, metadata, selected variables, model options, and analysis notes to an RDS file.

Usage

```
save_hawaspatial_state(state, file)
```

Arguments

state	A named list containing workflow settings and metadata.
file	Path to the output .rds file.

Value

Invisibly returns the normalized output file path.

Examples

```
st <- list(indicator = "poverty", year = c(2017, 2022), admin_level = "region")  
f <- tempfile(fileext = ".rds")  
save_hawaspatial_state(st, f)  
restored <- load_hawaspatial_state(f)  
restored$indicator
```

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