Package ‘SpaDES’

June 15, 2018

Type Package

Title Develop and Run Spatially Explicit Discrete Event Simulation Models

Description Metapackage for implementing a variety of event-based models, with a focus on spatially explicit models. These include raster-based, event-based, and agent-based models. The core simulation components (provided by 'SpaDES.core') are built upon a discrete event simulation (DES; see Matloff (2011) ch 7.8.3 <https://nostarch.com/artofr.htm>) framework that facilitates modularity, and easily enables the user to include additional functionality by running user-built simulation modules (see also 'SpaDES.tools'). Included are numerous tools to visualize rasters and other maps (via 'quickPlot'), and caching methods for reproducible simulations (via 'reproducible'). Additional functionality is provided by the 'SpaDES.addins' and 'SpaDES.shiny' packages.

URL http://spades.predictiveecology.org,

https://github.com/predictiveecology/spades

Date 2018-06-12

Version 2.0.2

Depends R (>= 3.3.0)

Imports methods, quickPlot, reproducible, SpaDES.addins, SpaDES.core, SpaDES.tools, utils

Suggests archivist, devtools, hunspell, igraph, knitr, raster,

rmarkdown, testthat, tkrplot

License GPL-3

VignetteBuilder knitr, rmarkdown

BugReports https://github.com/PredictiveEcology/SpaDES

ByteCompile yes

Collate 'spades-package.R' 'zzz.R'

RoxygenNote 6.0.1

NeedsCompilation no
Metapackage for implementing a variety of event-based models, with a focus on spatially explicit models. These include raster-based, event-based, and agent-based models. The core simulation components (provided by SpaDES.core) are built upon a discrete event simulation (DES; see Matloff (2011) ch 7.8.3 https://nostarch.com/artofr.htm) framework that facilitates modularity, and easily enables the user to include additional functionality by running user-built simulation modules (see also SpaDES.tools). Included are numerous tools to visualize rasters and other maps (via quickPlot), and caching methods for reproducible simulations (via reproducible). Additional functionality is provided by the SpaDES.addins and SpaDES.shiny packages (see below).

Bug reports:

- quickPlot package: https://github.com/PredictiveEcology/quickPlot/issues
- reproducible package: https://github.com/PredictiveEcology/reproducible/issues
- SpaDES.addins package: https://github.com/PredictiveEcology/SpaDES.addins/issues
- SpaDES.core package: https://github.com/PredictiveEcology/SpaDES.core/issues
- SpaDES.shiny package: https://github.com/PredictiveEcology/SpaDES.shiny/issues
- SpaDES.tools package: https://github.com/PredictiveEcology/SpaDES.tools/issues

Module repository: https://github.com/PredictiveEcology/SpaDES-modules

Wiki: https://github.com/PredictiveEcology/SpaDES/wiki
The SpaDES.core package

The core discrete event simulation framework. See SpaDES.core, and the vignettes therein (browseVignettes()).

The SpaDES.tools package

Additional utilities for developing ecological simulation models. See SpaDES.tools.

The SpaDES.addins package

A set of RStudio addins to assist with SpaDES module development.

The SpaDES.shiny package

Utilities for developing and running shiny-based app interfaces to SpaDES simulations.

The quickPlot package

The core SpaDES plotting engine, build upon speed and modularity.

The reproducible package

Provides several aspects of reproducible simulations, including simulation caching.

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See Also

Useful links:

- [http://spades.predictiveecology.org](http://spades.predictiveecology.org)
- [https://github.com/PredictiveEcology/SpaDES](https://github.com/PredictiveEcology/SpaDES)
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