Package: r5rgui (via r-universe)

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Title Graphical User Interface for 'r5r' Router

Version 0.2.0

Description Interactively build and explore public transit routes with 'r5r' package via a graphical user interface in a 'shiny' app. The underlying routing methods are described in Pereira et al. (2021) <doi:10.32866/001c.21262>.

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URL https://github.com/e-kotov/r5rgui, https://www.ekotov.pro/r5rgui/

BugReports https://github.com/e-kotov/r5rgui/issues

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Author Egor Kotov [aut, cre, cph] (ORCID: <https://orcid.org/0000-0001-6690-5345>)

Maintainer Egor Kotov <kotov.egor@gmail.com>

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r5r_gui *Run the r5rgui Shiny Application*

Description

This function launches a Shiny application that provides a graphical user interface for the 'r5r' package, allowing for interactive transit routing.

Usage

```
r5r_gui(
  r5r_network,
  center = NULL,
  zoom = NULL,
  departure_date = Sys.Date(),
  mode = c("WALK", "TRANSIT"),
  basemaps = list(Positron = mapgl::carto_style("positron"), `Dark Matter` =
    mapgl::carto_style("dark-matter"), Voyager = mapgl::carto_style("voyager"))
)
```

Arguments

r5r_network	A pre-built 'r5r' network object, or a named list of such objects for comparison. If a list is provided, the list names will be used as labels in the GUI. If a single object is provided, its variable name will be used as the label.
center	A numeric vector of length 2, specifying the initial longitude and latitude for the map's center. If NULL (the default), the map will be centered on the bounding box of the r5r_network. If {r5r} is below version 2.4.0, calculating the bounding box may be slow.
zoom	An integer specifying the initial zoom level of the map. If NULL (the default), the zoom level will be automatically calculated to fit the bounding box of the r5r_network. If {r5r} is below version 2.4.0, calculating the bounding box may be slow.
departure_date	A Date object specifying the initial departure date for the trip. Defaults to the current system date.
mode	A character vector specifying the initial transport modes. This is passed directly to the mode argument in detailed_itineraries() (and other functions of r5r). Defaults to c("WALK", "TRANSIT").
basemaps	A named list of MapLibre style URLs (or style generator functions like mapgl::carto_style()). The names are used in the GUI selector. Defaults to a set of Carto styles (Voyager, Positron, Dark Matter). See mapgl styling helpers for options.

Value

This function does not return a value; it launches a Shiny application.

Examples

```
if (interactive()) {
  # First, build the r5r network
  library(r5r)

  # Note: This requires a valid r5r network.
  # Using the sample data included in the r5r package:
  data_path <- system.file("extdata/poa", package = "r5r")
  r5r_network <- setup_r5(data_path = data_path)

  # Launch the application without specifying center and zoom
  # The map will be automatically centered and zoomed to the network's extent
  r5r_gui(r5r_network)

  # Launch with a specific departure date with auto-zoom and center
  r5r_gui(r5r_network, departure_date = as.Date("2019-05-13"))

  # Launch with specific transport modes
  r5r_gui(r5r_network, mode = c("WALK", "BUS"))

  # Manually define map center and zoom
  map_center <- c(-51.22, -30.05)
  map_zoom <- 11
  r5r_gui(r5r_network, center = map_center, zoom = map_zoom)

  # Compare two networks
  # Note: For this example, we use the same network object twice.
  # In a real scenario, you would use two different networks (e.g. current vs future).
  r5r_gui(list("Baseline" = r5r_network, "Scenario A" = r5r_network))
}
```

---

r5r_gui_demo *Run a Demonstration of the r5rgui Application*

Description

A simple wrapper function to launch the `r5rgui` Shiny application using the sample Porto Alegre dataset included with the `r5r` package.

This function is designed for ease of use and demonstration purposes. It automatically handles the setup of the `r5r_network` object and provides default map settings (center and zoom) appropriate for the sample data.

Usage

```
r5r_gui_demo(mode = c("WALK", "TRANSIT"))
```

Arguments

mode	A character vector specifying the initial transport modes. Defaults to `c("WALK", "TRANSIT")`.

Details

The function first locates the sample data within the `r5r` package, then calls `r5r::setup_r5()` to build the routing core. Finally, it launches the Shiny app by calling `r5r_gui()` with these pre-configured objects. Please note that `r5r` may need to download the sample data on first use, which requires an internet connection.

Value

This function does not return a value; it launches a Shiny application.

Examples

```
if (interactive()) {
  # To run the demo application, simply call the function:
  r5r_gui_demo()

  # Run with specific transport modes
  r5r_gui_demo(mode = c("WALK", "BUS"))
}
```

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