Package 'Certara.RsNLME.ModelExecutor'

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Title Execute Pharmacometric Models Using 'shiny'

Version 3.0.2

Description Execute Nonlinear Mixed Effects (NLME) models for pharmacometrics using a 'shiny' interface. Specify engine parameters and select from different run options, including simple estimation, stepwise covariate search, bootstrapping, simulation, visual predictive check, and more. Models are executed using the 'Certara.RsNLME' package.

Depends R (>= 4.0)

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URL https://certara.github.io/R-RsNLME-model-executor/

Encoding UTF-8

RoxygenNote 7.3.2

Suggests knitr, rmarkdown, testthat (>= 3.0.0)

Imports Certara.RsNLME, Certara.NLME8, shinyAce, shinymeta, bslib (>= 0.7.0), htmltools, magrittr, dplyr, shiny (>= 1.7.4), shinyFiles, shinyjs, shinyWidgets, stringr, tools, fs, ggplot2, future, promises, reshape, jsonlite, DT

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NeedsCompilation no

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Repository CRAN

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`execute_mmdlModel` *Run Model Executor from Pirana*

Description

Used by Pirana internally to launch the Model Executor Shiny GUI.

Usage

```
execute_mmdlModel(metamodelFile, hostsfile)
```

Arguments

`metamodelFile`	Path to existing metamodel file `.mmdl`.
`hostsfile`	Path to hosts definitions file `.json`. Note, this file is automatically generated by Pirana given the user provided NLME host setup in Pirana settings.

Value

Deploys a Shiny app to execute a `Certara.RsNLME` model. Returns `NULL` if assigned to an object.

Examples

```
if (interactive()) {
# Get existing mmdl file
mmdl_file <- system.file("vignettesdata/OneCpt_IVInfusion.mmdl",
  package = "Certara.RsNLME")

# Create hosts file json. Note, hosts file is automatically created by Pirana.
hosts_file <- tempfile(pattern = "hosts", fileext = ".json")
jsonlite::write_json(
  list(
   list(profile_name = "examplehost", cores_number = 1, os = "Windows", parallel_mode="None")),
  auto_unbox = TRUE,
  path = hosts_file
  )
execute_mmdlModel(
  mmdl_file,
  hosts_file
  )
}
```

modelExecutorUI *Run Model Executor*

Description

Used to execute a model developed in Certara.RsNLME from a Shiny GUI.

Usage

```
modelExecutorUI(
  model,
  hosts,
  wd,
  outputfile = "shiny_dirs.txt",
  metamodelFileName = "temp.mmdl",
  fromPirana = FALSE
)
```

Arguments

model	Model object generated from Certara.RsNLME.
hosts	One or more hosts generated from Certara.RsNLME::hostParams(). If missing, the default local host will be used.
wd	Working directory where the model output folders will be created. If missing, the directory specified in the model object will be used model@modelInfo@workingDir.
outputfile	Text file providing a list of model output subfolders generated inside wd during the Shiny session. Only applicable for Pirana.
metamodelFileName	Name of the resulting metamodel to generate. Only applicable for Pirana.
fromPirana	Logical; set to TRUE when launching app from Pirana.

Value

Deploys a Shiny app to execute a Certara.RsNLME model. Returns NULL if assigned to an object.

Examples

```
if (interactive()) {
model <- Certara.RsNLME::pkmodel(
  parameterization = "Clearance",
  absorption = "Intravenous",
  numCompartments = 2,
  data = Certara.RsNLME::pkData,
  ID = "Subject",
  A1 = "Amount",
  Time = "Act_Time",
  CObs = "Conc",
```

```
  modelName = "pk_model")

modelExecutorUI(model)

}
```

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