Package ‘MobileTrigger’

October 12, 2022

Type Package
Title Run Reports, Models, and Scripts from a Mobile Device
Version 0.0.31
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Description A framework for interacting with
R modules such as Reports, Models, and Scripts from a mobile device.
The framework allows you to list available modules and select a
module of interest using a basic e-mail interface. After
selecting a specific module, you can either run it as is or
provide input via the e-mail interface. After parsing your
request, R will send the results back to your mobile device.

License GPL-3
Encoding UTF-8
LazyData true
RoxygenNote 6.1.1
Imports knitr, kableExtra, ggplot2, XML, plyr, utils, yaml, mailR
Depends R (>= 3.0), caret
NeedsCompilation no
Repository CRAN
Date/Publication 2019-05-16 12:50:12 UTC

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createMessage

**Description**

Function takes i) a selected model from the TRIGGER_PATH/Models/ folder and the results and makes an HTML summary for the e-mail message response.

**Usage**

```r
createMessage(ID, path = NULL, outputData)
```

**Arguments**

- **ID**: integer, Model ID value determined from MobileTrigger::ListModels() output when SelectMDL = NULL.
- **path**: string, path to the /Models/ folder.
- **outputData**: data.frame, table with model, inputs, and outputs.

**Value**

A HTML summary for e-mail message response.

**Examples**

```r
# createMessage Example
#
# MDLpath <- 'c:/triggers/Models/'
# InputPath <- 'c:/triggers/modelInput.txt'
#
# # Read Data and Model ----------------------------------------------
# Input <- MailTriggerInput(InputPath=InputPath)
#
# # Load Selected Model ----------------------------------------------
# MDL <- GetModel(ID = Input$ID, path = MDLpath)
#
# # Predict -----------------------------------------------------------
# if(MDL == 'No Models in Path'){
# } else if(!is.null(MDL[[1]]$scaled)){
#     if(MDL[[1]]$scaled == T){
```
GetModel

Get Model for Trigger Processing

Description

Function loads a model from the TRIGGER_PATH/Models/ folder saved as a *.Rdata file. The
Model is then applied to input data collected from an e-mail trigger via the MobileTrigger::MailTriggerInput()
function

Usage

GetModel(ID = NULL, path = NULL)

Arguments

ID integer, Model ID value determined from MobileTrigger::ListModels() output
when SelectMDL = NULL

path string, path to the /Models/ folder.

Value

A model into the environment

Examples

# Load model
MODELPATH <- "C:/Triggers/Models/"
MDL <- GetModel(ID = 1, path = MODELPATH)

# To predict use:
predict(MDL[[1]], newdata) # to get the model use the MDL[[1]]
ListModels

List Available Models

Description

Creates an HTML table for all or selected models in the [TRIGGER_PATH]/Models/ folder. This table is used as part of a message being sent out to a receiving e-mail client.

Usage

ListModels(path = NULL, SelectMDL = NULL)

Arguments

path string, path to the /Models/ folder.
SelectMDL integer, Model ID value determined from MobileTrigger::ListModels() output when SelectMDL = NULL

Value

If SelectMDL = NULL: An HTML table of all models in the /Models/ folder. If SelectMDL is a ModelID number from the complete model list it only returns and HTML table with the selected model

Examples

################################################# # Get all the Available Models # ################################################# MODELPATH <- "C:/Triggers/Models/
HTML.Message <- ListModels(path = MODELPATH)
## Use the HTML.Message to send table of Models with MailR package.

################################################# # Get Selected Model # ################################################# HTML.Message <- ListModels(path = MODELPATH, SelectMDL = 1)
## Use the HTML.Message to send table of Selected Model with MailR package.
ListReports

List Available Reports

Description

Creates an HTML table for all or selected reports in the [TRIGGER_PATH]/Reports/ folder. This table is used as part of a message being sent out to a receiving e-mail client.

Usage

ListReports(path = NULL, SelectREPORT = NULL)

Arguments

- path: string, path to the /Reports/ folder.
- SelectREPORT: integer, Report ID value determined from MobileTrigger::ListReports() output when SelectREPORT = NULL

Value

If SelectREPORT = NULL: An HTML table of all scripts in the /Reports/ folder. If SelectREPORT is a Report ID number from the complete report list it only returns and HTML table with the selected report.

Examples

# Get all the Available Reports #
REPORTPATH <- "C:/Triggers/Reports/"
HTML.Message <- ListReports(path = REPORTPATH)
## Use the HTML.Message to send table of Reports with MailR package.

# Get Selected Reports #
HTML.Message <- ListReports(path = REPORTPATH, SelectREPORT = 1)
## Use the HTML.Message to send table of Selected Script with MailR package.
ListScripts

List Available Scripts

Description

Creates an HTML table for all or selected scripts in the [TRIGGER_PATH]/Scripts/ folder. This table is used as part of a message being sent out to a receiving e-mail client.

Usage

ListScripts(path = NULL, SelectSCRIPT = NULL)

Arguments

path                      string, path to the /Scripts/ folder.
SelectSCRIPT             integer, Script ID value determined from MobileTrigger::ListScripts() output when SelectSCRIPT = NULL

Value

If SelectSCRIPT = NULL: An HTML table of all scripts in the /Scripts/ folder. If SelectSCRIPT is a Script ID number from the complete script list it only returns and HTML table with the selected script

Examples

################################################################################
# Get all the Available Scripts #
################################################################################
SCRIPTPATH <- "C:/Triggers/Scripts/
HTML.Message <- ListScripts(path = SCRIPTPATH)
## Use the HTML.Message to send table of Scripts with MailR package.

################################################################################
# Get Selected Script #
################################################################################
HTML.Message <- ListScripts(path = SCRIPTPATH, SelectSCRIPT = 1)
## Use the HTML.Message to send table of Selected Script with MailR package.
MailTriggerInput

*Get Input From a Mail Trigger Message*

**Description**

Parses inputs from a message saved when the e-mail client run its rules. Parser is looking for UseModel, UseScript, or UseReport follow by a number (ID) associated with Model, Script, or Report. For reports and scripts there is also the option to supply comma separated data.

**Usage**

```r
MailTriggerInput(InputPath)
```

**Arguments**

- **InputPath**: string, path to a saved e-mail message from your e-mail client Likely filenames in the [TriggerPath] are modelInput.txt, ScriptInput.txt, or ReportInput.txt

**Value**

- list, ID, integer ID of the model, script, or report selected.
- data, data.frame of any supplied inputs.

**Examples**

```r
# Get E-mail Trigger Input
MDL_Input <- MailTriggerInput(InputPath="c:/triggers/modelInput.txt")
SCRPT_Input <- MailTriggerInput(InputPath="c:/triggers/ScriptInput.txt")
RPT_Input <- MailTriggerInput(InputPath="c:/triggers/ReportInput.txt")
```

---

ScriptHeader

*Header Template for Script Files*

**Description**

Quick printout of an XML style header for script files. This information provided in the header file will be used to populate the data returned to the user when they request a script file list.

**Usage**

```r
ScriptHeader()
```
SetupWindowsTrigger

Value

Template Header for Scripts

Examples

###################################
# Generate Template Script Header #
###################################
ScriptHeader()

Usage

SetupWindowsTrigger(path = NULL, SMTP.Settings, Mail.To, Mail.From)

Arguments

<table>
<thead>
<tr>
<th>Argument</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>path</td>
<td>string, top level folder called the [TriggerPath]</td>
</tr>
<tr>
<td>SMTP.Settings</td>
<td>list, list of smtp.setting to send to mailR::mail.send. See examples below for outlook and other styles of smtp setting might be specified</td>
</tr>
<tr>
<td>Mail.To</td>
<td>string, e-mail address you want MobileTriggers to respond to</td>
</tr>
<tr>
<td>Mail.From</td>
<td>string, e-mail address you want MobileTriggers to use to send.</td>
</tr>
</tbody>
</table>

Value

Sets up a folder and file structure at the [TriggerPath].

Examples

#################################
# Setting of MobileTriggers    #
#################################

## OUTLOOK Style (uses tls = TRUE argument) ##
SetupWindowsTrigger(path="c:/triggers",
Mail.To = "Your.Email@mobile.com",
Mail.From = "someuser@outlook.com",
testTriggers

SMTP.Settings=list(
    host.name = 'smtp.office365.com',
    port = 587,
    user.name = 'someuser@outlook.com',
    passwd = 'password', tls = TRUE)
)

## Other STYLE (uses ssl = TRUE argument) ##
SetupWindowsTrigger(path="c:/triggers",
    Mail.To = "Your.Email@mobile.com",
    Mail.From = "R.Triggers@desktop.com",
    SMTP.Settings=list(
        host.name = 'some.smtp.sever.com',
        port = 587,
        user.name = 'R.Triggers@desktop.com',
        passwd = 'password', ssl = TRUE)
)

---

**testTriggers**  
**Test Mobile Triggers**

**Description**
Tests to make sure communication between R and your e-mail client is working as expected with MobileTriggers.

**Usage**

testTriggers(TestWhat = "Lists", path = NULL, Mail.To = NULL, Mail.From = NULL, Mail.From.SMTP.Settings = NULL)

**Arguments**

- **TestWhat** string, options: "Lists", "RunModels", "RunScripts", "RunReports"
- **path** string, top level folder called the [TriggerPath]
- **Mail.To** string, e-mail address that will trigger your e-mail client (e.g., Outlook or Thunderbird).
- **Mail.From** string, e-mail address of the mobile device. (simulation purposes)
- **Mail.From.SMTP.Settings** list, list of SMTP settings to send to mailR::mail.send.

**Value**
Sends test messages to your email client.
Examples

```
# Test Triggers

# TriggerMSG

# Send message from mobile triggers
```

**Description**

Function is a wrapper for mailR::send.mail() function. Function gets its mail settings from mailsettings.R file in the [TriggerPath]

**Usage**

```
TriggerMSG(path = NULL, subject = NULL, body = NULL, html = F,
authenticate = T, debug = F, ...)  
```

**Arguments**

- **path**: string, top level folder called the [TriggerPath]
- **subject**: string, subject text of the message
- **body**: string, body text of the message
- **html**: boolean, use HTML or plain text.
- **authenticate**: boolean, use authentication for SMTP sign-in
- **debug**: boolean, option to turn on mailR debugging
- **...**: additional options to pass through to mailR::send.mail()
**Value**

message to be sent to mobile email client.

**Examples**

```
# Send Message with Mobile Triggers #
# the function internals will call your mailsettings
# from the mailsettings.R file in your trigger root folder

TriggerMSG(path = 'c:/triggers',
            body = "hello world",
            subject = "Script List",
            html = F, authenticate = T)
```

---

**WriteThunderBirdFilters**

*Setup Rule File for ThunderBird & FiltaQuilla*

**Description**

Function sets up the 6 rules you need to list and run the Models, Scripts, and Reports

**Usage**

```
WriteThunderBirdFilters(path = NULL, sent.from = NULL)
```

**Arguments**

- **path** | string, top level folder called the [TriggerPath]
- **sent.from** | string, e-mail address you will be sending your triggers from when you are out of home or office. The mobile e-mail address.

**Value**

`msgFilterRules.dat` on the [TriggerPath].

**Examples**

```
# Setting of MobileTriggers With ThunderBird Rules #
SetupWindowsTrigger(path="c:/triggers",
```
Mail.To = "Your.Email@mobile.com",
Mail.From = "R.Triggers@desktop.com",
SMTP.Settings=list(
  host.name = 'some.smtp.server.com',
  port = 587,
  user.name = 'R.Triggers@desktop.com',
  passwd = 'password', ssl = TRUE)
)

WriteThunderBirdFilters(path = "c:/triggers",
  sent.from = "your.email@Mobile.net")
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