

Package ‘MobileTrigger’

May 16, 2019

Type Package

Title Run Reports, Models, and Scripts from a Mobile Device

Version 0.0.31

Author Kenith Grey

Maintainer Kenith Grey <kenithgrey@r-bar.net>

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

R topics documented:

createMessage	2
GetModel	3
ListModels	4
ListReports	5
ListScripts	6
MailTriggerInput	7
ScriptHeader	7

SetupWindowsTrigger	8
testTriggers	9
TriggerMSG	10
WriteThunderBirdFilters	11

Index	13
--------------	-----------

createMessage	<i>HTML Summary of Model Result</i>
---------------	-------------------------------------

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

```
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

```
#####
# 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){
```

```

    Input$data$Prediction <-
      unlist(predict(MDL[[1]], Input$data)) * MDL[[1]]$outRange + MDL[[1]]$outMin}
  }else{
    Input$data$Prediction <- unlist(predict(MDL[1], Input$data))
  }

# Build Message -----
msg <- createMessage(ID = Input$ID,
                    path = MDLpath,
                    outputData = Input$data)

```

 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::ListModel() output when SelectMDL = NULL
path	string, path to the /Models/ folder.

Value

A model into the environment

Examples

```

#####
# Get 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	<i>List Available Reports</i>
-------------	-------------------------------

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	<i>Get Input From a Mail Trigger Message</i>
------------------	--

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

```
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

```
#####
# Get E-mail Trigger Input      #
#####

## The file is a saved e-mail message from your e-mail client
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	<i>Header Template for Script Files</i>
--------------	---

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

```
ScriptHeader()
```

Value

Template Header for Scripts

Examples

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

SetupWindowsTrigger *Setup MobileTrigger Folder Structure and Files*

Description

This is the heart of the MobileTrigger package. You specify where you want your trigger folder to be and some e-mail information and this function builds all the scripts you need to get started. At this time, the function works ONLY for windows users.

Usage

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

Arguments

path	string, top level folder called the [TriggerPath]
SMTP.Settings	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
Mail.To	string, e-mail address you want MobileTriggers to respond to
Mail.From	string, e-mail address you want MobileTriggers to use to send.

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",
```



```

        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          #
#####

testTriggers(
  TestWhat = "Lists",
  # TestWhat = "RunModels", # Other Test Options
  # TestWhat = "RunScripts", # Other Test Options
  # TestWhat = "RunReports", # Other Test Options
  path = path,
  Mail.To = "[desktop.client@home.com]",
  Mail.From = "[your.mobile@gmail.com]",
  Mail.From.SMTP.Settings =
  list(host.name = "smtp.gmail.com",
        port = 587,
        user.name = "[your.mobile@gmail.com]",
        passwd = '[TVs_With_Knobs]',
        tls = TRUE)
)
```

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.sever.com',
  port = 587,
  user.name = 'R.Triggers@desktop.com',
  passwd = 'password', ssl = TRUE)
)

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

Index

`createMessage`, [2](#)

`GetModel`, [3](#)

`ListModels`, [4](#)

`ListReports`, [5](#)

`ListScripts`, [6](#)

`MailTriggerInput`, [7](#)

`ScriptHeader`, [7](#)

`SetupWindowsTrigger`, [8](#)

`testTriggers`, [9](#)

`TriggerMSG`, [10](#)

`WriteThunderBirdFilters`, [11](#)