

Timber! Creating Logs and Addins for audit- ready R Code (30 mins)



Presenter

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Objective

Demonstrate how to make a RStudio Addin and utilize the timber package to create logs for your R scripts.

RStudio Addin

RStudio addins provide a mechanism for executing R functions interactively from within the RStudio IDE—either through keyboard shortcuts, or through the *Addins* menu.

An addin can be as simple as a function that inserts a commonly used snippet of text, and as complex as a Shiny application that accepts input from the user, and later mutates a document open in RStudio. The sky is the limit!

What about executing a job in R that generates a log file like SAS. What about batch execution?

Demo of making an Addin

Brief demo of how easy it is to make an Addin! We will follow the [RStudio Addin Guidance Document](#)

{timber}



```
-----
                        timber Metadata
-----
This log was generated using timber 0.0.0.9001
timber package version: 0.0.0.9001
timber license: MIT + file LICENSE
timber build: R 4.0.2; ; 2021-07-09 14:40:21 UTC; unix
timber link to repository: https://github.com/atorus-research/timber
-----
                        User Information
-----
User: daphne.laurel
-----
                        Session Information
-----
R version 4.0.2 (2020-06-22)
Platform: x86_64-pc-linux-gnu (64-bit)
Running under: Ubuntu 18.04.5 LTS

Matrix products: default
BLAS:   /usr/lib/x86_64-linux-gnu/openblas/libblas.so.3
LAPACK: /usr/lib/x86_64-linux-gnu/libopenblas-r0.2.20.so

locale:
 [1] LC_CTYPE=C.UTF-8      LC_NUMERIC=C          LC_TIME=C.UTF-8      LC_COLLATE=C.UTF-8
 [5] LC_MONETARY=C.UTF-8   LC_MESSAGES=C.UTF-8   LC_PAPER=C.UTF-8     LC_NAME=C
[9] LC_ADDRESS=C          LC_TELEPHONE=C        LC_MEASUREMENT=C.UTF-8 LC_IDENTIFICATION=C
```

Challenges for R in CRP:

- There is no SAS-like log file for R-based programs that show traceability and help to create audit-ready code.

Solutions

- Created a utilities and wrapper functions to capture user info, session information and warnings and errors in an easy-to-read format.
- Allows for recreation of script, not just the output.

Future development path

- Interactive display screen to batch submit multiple programs.
- What else should go in a log? Companies might have different needs.

Demo of using Timber Addin

Brief demo of how to use the Timber Addin to create a log file for an R Script. We will follow the simple timber script

[atorus-research/timber: Tools to facilitate logging in a clinical environment with the goal of making code easily traceable and reproducible. \(github.com\)](https://github.com/atorus-research/timber)

Welcome to the {pharmaverse}!

