Simple and Reliable R Package Documentation with Sinew

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Whoami

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R Packages

- **What**: Bundled script to reproduce analysis
  - Code
  - Data
  - Documentation
  - Tests
- **Why**: Promotes collaboration across researchers
- **Added Value**: Consistent help documentation format

Structure

- **DESCRIPTION** : Package Metadata
- **NAMESPACE** : Manages how the packages interacts with other packages
- **R/** : script
- **man/** : documentation (Rd files)
- **data/** : data
- **tests/** : unit tests

Roxygen2

Roxygen2 is a R package that creates an easy api to maintain the documentation for each function and the package namespace.

- You do not have to manually write the Rd files that are needed to populate the man subdirectory.

    - The documentation is in the same place as the object that it is describing.

- You do not have to manually maintain the NAMESPACE file.

    - Namespacing for the object is part of the documentation.

High Bars

This is great, but is still a pretty high bar to pass for a non-expert developers.

- You have to understand and track what are the `depends`, `imports` and `suggests` of the package.

  - `@import` and `@importFrom`

- You have to keep a consistent documentation layout across functions.

  - `@params`, `@examples`

- You have to manage links across packages

  - `@seealso`

Juggling Act

For more seasoned package developers this also can be an arduous task.

- Every change to the script

  - e.g. using another package, add a formal argument

- You need to update the `Roxygen2` documentation

  - update `@params, @imports, @importFrom`

Sinew

- Sinew is a package that progrmatically populates roxygen2 fields with inoformation found within the function you are documenting.

- Allowing the developer to focus on the development and not on the continuous managment of the namespacing and mundane manual documentation tasks.

CRAN: **https://cran.r-project.org/web/packages/sinew/index.html**

Github Repository:
https://www.github.com/metrumresearchgroup/sinew

Gitbook: **https://metrumresearchgroup.github.io/sinew/**

Package Goal

The goal of `{sinew}` is to

- automate nearly all of the manual tasks needed to document functions

- properly set up the import fields for oxygenation

- make it easier to attain documentation consistency across functions and packages.

- change and append updated parameters, definitions, namespacing to existing documentation

Sinew Workflow Example

In the following example we will create a fully functional package with valid namespacing and documentation that passes `R CMD check --as-cran` using `{sinew}` in 10 minutes.

Time permitting we will see the interactive shiny gadget of `{sinew}`

Moving to Rmd....

```r
library(rstudioapi)
navigateToFile('sinew_example_notebook.Rmd')
```