

# R Packages for a Reproducible Workflow

Daniela Palleschi

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## 1 here package

- uses file path relative to the current project

```
# install here package
install.packages("here")

# read in a csv file
readr::read_csv(here::here("folder", "subfolder", "subsubfolder", "file.csv"))
# or
readr::read_csv(here::here("folder/subfolder/subsubfolder/file.csv"))
```

## 2 pacman package

- `p_load()` function checks if listed packages are already installed
  - if yes, loads them (as with `library()`)
  - if no, installs and then loads them (as long as they're CRAN packages!)

```
# install pacman
install.packages("pacman")

# install and/or load packages
pacman::p_load(here,
               renv,
               kableExtra)
```

## 3 renv package

### 3.1 Activate or init

- to initialise a new *project-local environment*:

```
renv::init()
```

### 3.2 Snapshot

- update `renv.lock` file

```
renv::snapshot()
```

After updating the `renv.lock` file, remember to commit/push these changes to git (if you're using it)!

### 3.3 Restore

- will restore your project to the most recent `renv.lock` file versions
  - this step follows `snapshot()`, which updates the `renv.lock` file
- very useful after updating R!

```
renv::restore()
```

### 3.4 Upgrade

- to update the `renv` package:

```
# upgrade renv version  
renv::upgrade()
```

### 3.5 Update and Hydrate

```
# updates all packages (stored in renv.lock) in the renv cache  
renv::hydrate(update = "all")  
  
# update should have no effect now, but doesn't hurt to check  
renv::update()  
  
# now take a snapshot with the updated packages  
renv::snapshot()
```

After updating the `renv.lock` file, remember to commit/push these changes to git (if you're using it)!