

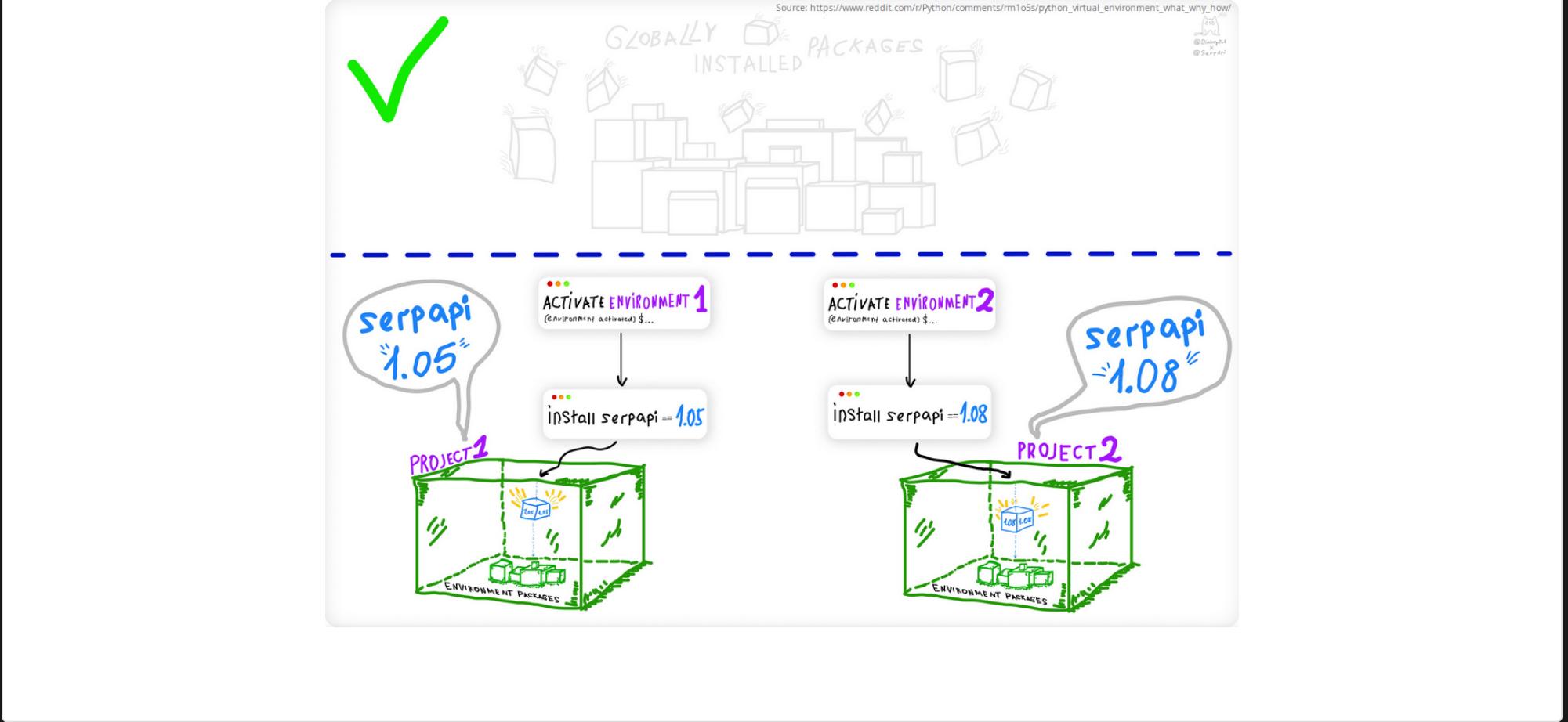
Com emprar "renv" i no morir en l'intent

Trobada analistes de dades de la Gencat a l'ACA^[1] (C/ Provença 260, BCN). Dll. 16/01/2023,
15:30-17:00h.

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[3]



Trobada analistes de dades

La idea és desvirtualitzar-nos, conèixer-nos, compartir informació... i després qui vulgui ens podem allargar i anar a prendre quelcom.

Accés obert a partir de les 15h15. Entrant per la porta del carrer (Provença 260), just la primera sala a l'esquerra.

PROGRAMA

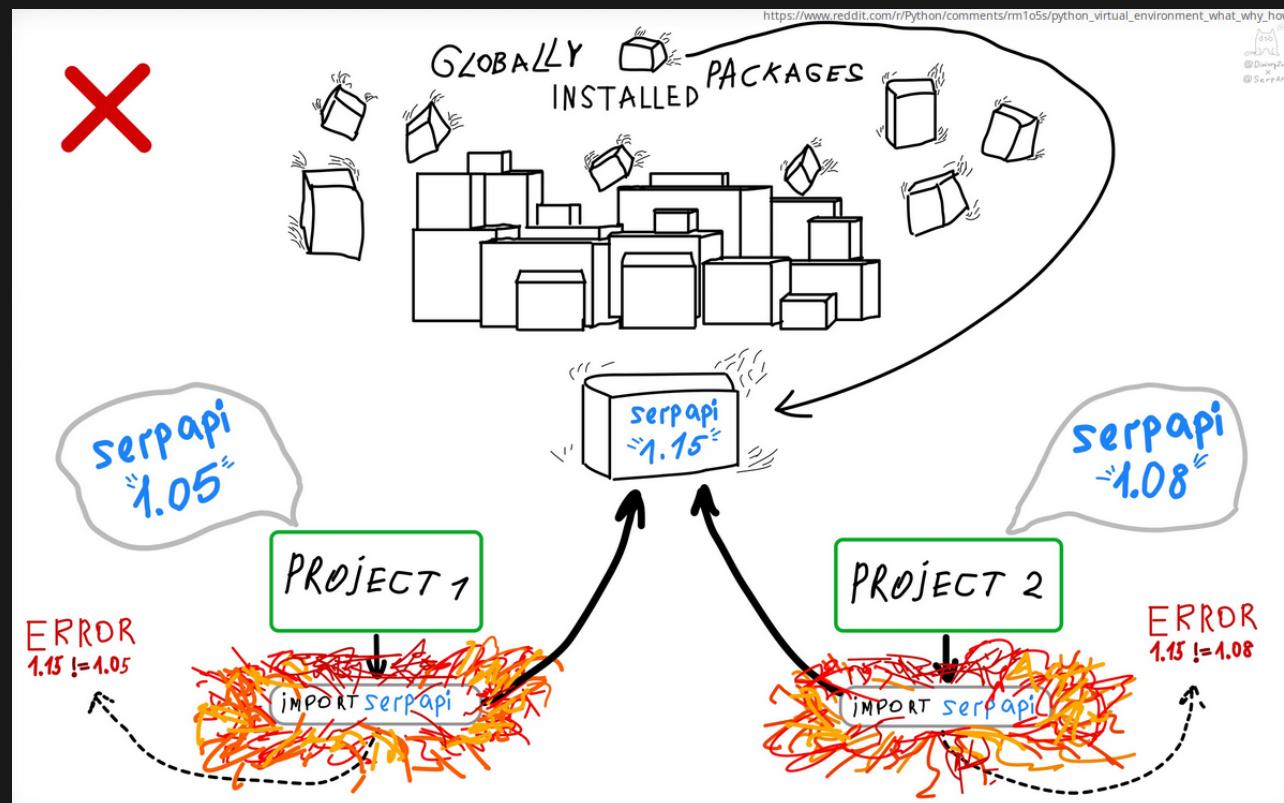
- 5' Benvinguda

- 20' **presentacions d'ús R general**
- 10' Presentació dades
- 30' 6 presentacions de casos pràctics
- 10' tRivial
- 10' conclusió i torn obert

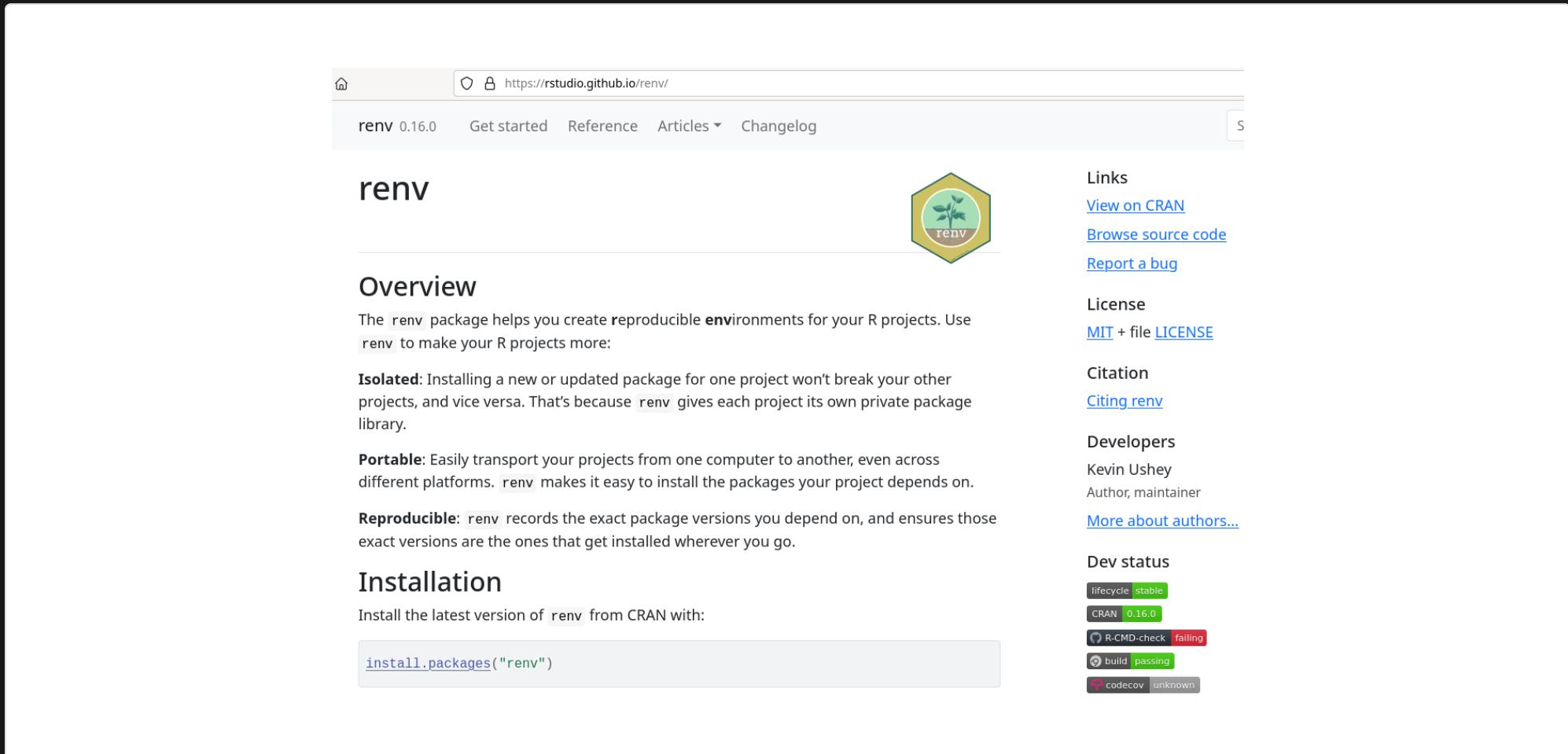
Taula de continguts de la mini-xerrada

- Com emprar "renv" i no morir en l'intent
- 1. Control de versions amb "entorns" de treball
- 2. Entorns virtuals en R amb renv
- 3. De utils: `: sessionInfo()` al `renv: : snapshot() + renv.lock`
- 4. "Happy path"
- 5. Infraestructura
- 6. Us avançat
- 7. Gràcies

1. Control de versions amb "entorns" de treball



2. Entorns virtuals en R amb renv



The screenshot shows the GitHub page for the `renv` package. At the top, there's a navigation bar with links for `renv` 0.16.0, Get started, Reference, Articles, Changelog, and a search bar. Below the navigation is the `renv` logo, which is a green hexagon containing a stylized plant. The main content area has a heading "Overview" followed by text explaining what `renv` does: it helps create reproducible environments for R projects. It highlights three features: **Isolated** (new packages don't break others), **Portable** (easily transportable across platforms), and **Reproducible** (records exact package versions). Below the overview is a section titled "Installation" with instructions to install from CRAN. A code block shows the command `install.packages("renv")`. To the right of the main content are several sidebar sections: "Links" with links to CRAN, source code, and bug reporting; "License" with a link to the MIT license file; "Citation" with a link to citation information; "Developers" listing Kevin Ushey as the author/maintainer; "More about authors..." with a link; and "Dev status" showing lifecycle as stable, CRAN version 0.16.0, R-CMD-check as failing, build as passing, and codecov status as unknown.

renv

Overview

The `renv` package helps you create **reproducible environments** for your R projects. Use `renv` to make your R projects more:

Isolated: Installing a new or updated package for one project won't break your other projects, and vice versa. That's because `renv` gives each project its own private package library.

Portable: Easily transport your projects from one computer to another, even across different platforms. `renv` makes it easy to install the packages your project depends on.

Reproducible: `renv` records the exact package versions you depend on, and ensures those exact versions are the ones that get installed wherever you go.

Installation

Install the latest version of `renv` from CRAN with:

```
install.packages("renv")
```

Links

[View on CRAN](#)
[Browse source code](#)
[Report a bug](#)

License

[MIT + file LICENSE](#)

Citation

[Citing renv](#)

Developers

Kevin Ushey
Author, maintainer
[More about authors...](#)

Dev status

lifecycle stable
CRAN 0.16.0
R-CMD-check failing
build passing
codecov unknown

3. De utils::sessionInfo() al renv::snapshot() + renv.lock

utils::sessionInfo()



```
> sessionInfo()
R version 4.1.2 (2021-11-01)
Platform: x86_64-pc-linux-gnu (64-bit)
Running under: Ubuntu 22.04.1 LTS

Matrix products: default
BLAS: /usr/lib/x86_64-linux-gnublas/libblas.so.3.10.0
LAPACK: /usr/lib/x86_64-linux-gnulapack/liblapack.so.3.10.0

locale:
[1] LC_CTYPE=ca_ES.UTF-8      LC_NUMERIC=C           LC_TIME=ca_ES.UTF-8
[4] LC_COLLATE=ca_ES.UTF-8    LC_MONETARY=ca_ES.UTF-8   LC_MESSAGES=ca_ES.UTF-8
[7] LC_PAPER=ca_ES.UTF-8     LC_NAME=C             LC_ADDRESS=C
[10] LC_TELEPHONE=C          LC_MEASUREMENT=ca_ES.UTF-8 LC_IDENTIFICATION=C

attached base packages:
[1] stats      graphics   grDevices datasets  utils      methods    base

other attached packages:
[1] kableExtra_1.3.4 fs_1.5.2       tictoc_1.1       lubridate_1.9.0  timechange_0.1.1
[6] janitor_2.1.0   knitr_1.40     markdown_1.3     RODBC_1.3-19    fst_0.9.8
[11]forcats_0.5.2   stringr_1.4.1   dplyr_1.0.10    purrr_0.3.5    readr_2.1.3
[16]tidyverse_1.3.1  tibble_3.1.8    ggplot2_3.4.0    tidyverse_1.3.1

loaded via a namespace (and not attached):
[1] httr_1.4.4        jsonlite_1.8.3    viridisLite_0.4.1 modelr_0.1.10    assertthat_0.2.1
[6] renv_0.16.0       cellranger_1.1.0  yaml_2.3.6       pillar_1.8.1     backports_1.4.1
[11] glue_1.6.2        digest_0.6.30     rvest_1.0.3      snakecase_0.11.0 colorspace_2.0-3
[16] htmltools_0.5.3   pkgconfig_2.0.3    broom_1.0.1      haven_2.5.1     scales_1.2.1
[21] webshot_0.5.4    svglite_2.1.0     openxlsx_4.2.5.1 rio_0.5.29      tzdb_0.3.0
[26] generics_0.1.3    ellipsis_0.3.2    withr_2.5.0      cli_3.4.1      magrittr_2.0.3
```

```
[31] crayon_1.5.2      readxl_1.4.1     evaluate_0.18    fansi_1.0.3      xml2_1.3.3
[36] foreign_0.8-82   tools_4.1.2      data.table_1.14.4 hms_1.1.2      lifecycle_1.0.3
[41] munsell_0.5.0    reprex_2.0.2    zip_2.2.2       compiler_4.1.2   systemfonts_1.0.4
[46] rlang_1.0.6      grid_4.1.2      fstcore_0.9.12  rstudioapi_0.14 rmarkdown_2.18
[51] gtable_0.3.1     DBI_1.1.3       curl_4.3.3      R6_2.5.1       fastmap_1.1.0
[56] utf8_1.2.2       stringi_1.7.8   parallel_4.1.2  Rcpp_1.0.9      vctrs_0.5.0
[61] dbplyr_2.2.1     tidyselect_1.2.0 xfun_0.34
```

>

renv::snapshot() i ./renv.lock



```
{
  "R": {
    "Version": "4.1.2",
    "Repositories": [
      {
        "Name": "CRAN",
        "URL": "https://cloud.r-project.org"
      }
    ],
    "Packages": {
      "DBI": {
        "Package": "DBI",
        "Version": "1.1.3",
        "Source": "Repository",
        "Repository": "CRAN",
        "Hash": "b2866e62bab9378c3cc9476a1954226b",
        "Requirements": []
      },
      "tinytex": {
        "Package": "tinytex",
        "Version": "0.42",
        "Source": "Repository",
        "Repository": "CRAN",
        "Hash": "7629c6c1540835d5248e6e7df265fa74",
        "Requirements": [
          "xfun"
        ]
      },
      "tzdb": {
        "Package": "tzdb",
        "Version": "0.3.0",
        "Source": "Repository",
        "Repository": "CRAN",
        "Hash": "b2e1cbce7c903eaf23ec05c58e59fb5e",
        "Requirements": [
          "cpp11"
        ]
      }
    }
  }
}
```

```
},
"zip": {
  "Package": "zip",
  "Version": "2.2.2",
  "Source": "Repository",
  "Repository": "CRAN",
  "Hash": "c42bfcec3fa6a0cce17cef8bc684f88",
  "Requirements": []
}
}
}
```

4. "Happy path"

Per a feina reproduïble

Comandes en terminal - Mànquina 1



```
cd carpeta_de_projecte
git init
R
[obrir projecte de RStudio]
renv::init() # per inicialitzar renv al projecte de codi
renv::snapshot() # per fer foto instantània de llista de paquets d'R emprats a tot el projecte i les seves versions
respectives
q()
git commit ...
git push
```

Comandes en terminal - Mànquina 2



```
cd carpeta_de_projecte
git clone/git pull ...
R
[obrir mateix projecte de RStudio]
renv::status() # per a informe de quins passos proposa fer
renv::restore() # per restaurar biblioteca de paquets (i versions) del projecte
[continuar treballant en el codi]
renv::snapshot() # per fer nova foto instantània (si hi ha nous paquets /io versions de paquets d'R més noves o més velles ;-)
)
q()
git commit ...
git push
```


5. Infraestructura

Els projectes amb `renv` escriuen i empren aquests arxius per funcionar:

Arxiu

.Rprofile

renv.lock

Ús

Emprat per activar `renv` per a noves sessions iniciades en el projecte (des de fora de RStudio també).

L'arxiu lockfile, que descriu l'estat de la biblioteca de paquets del teu projecte en un moment del temps.

renv/activate.R

renv/library

renv/settings.dcf

L'script d'activació executat per l'arxiu `.Rprofile` del projecte.

La biblioteca privada de paquets del projecte.

Configuració del projecte - veure `?settings` per més detalls.

Per omissió, `renv` empra memòria cau de paquets aquí:

Platform

Linux

macOS

Windows

Location

`~/.local/share/renv`

`~/Library/Application Support/renv`

`%LOCALAPPDATA%/renv`

6. Us avançat



```
renv::install("paquet", version="0.1") # per instal.lar versions antigues d'un paquet (útil també per a paquets descontinuats a CRAN!). Veure números de versió possibles a https://cran.r-project.org/src/contrib/Archive/paquet/
renv::record("paquet", version="0.1") # per desar a renv.lock la versió concreta
renv::deactivate() # per desactivar temporalment renv en el projecte
renv::activate() # per reactivar renv al projecte
renv::equip() # per a instal.lacions especials en windows
vignette("docker", package = "renv") # per a ús combinat amb docker
vignette("collaborating", package = "renv") # per millorar us col.laboratiu en equips
```

I moltes més. Veure:

[https://rstudio.github.io/renv/articles/renv.html^{\[4\]}](https://rstudio.github.io/renv/articles/renv.html)

7. Gràcies

Dr. Xavier de Pedro Puente

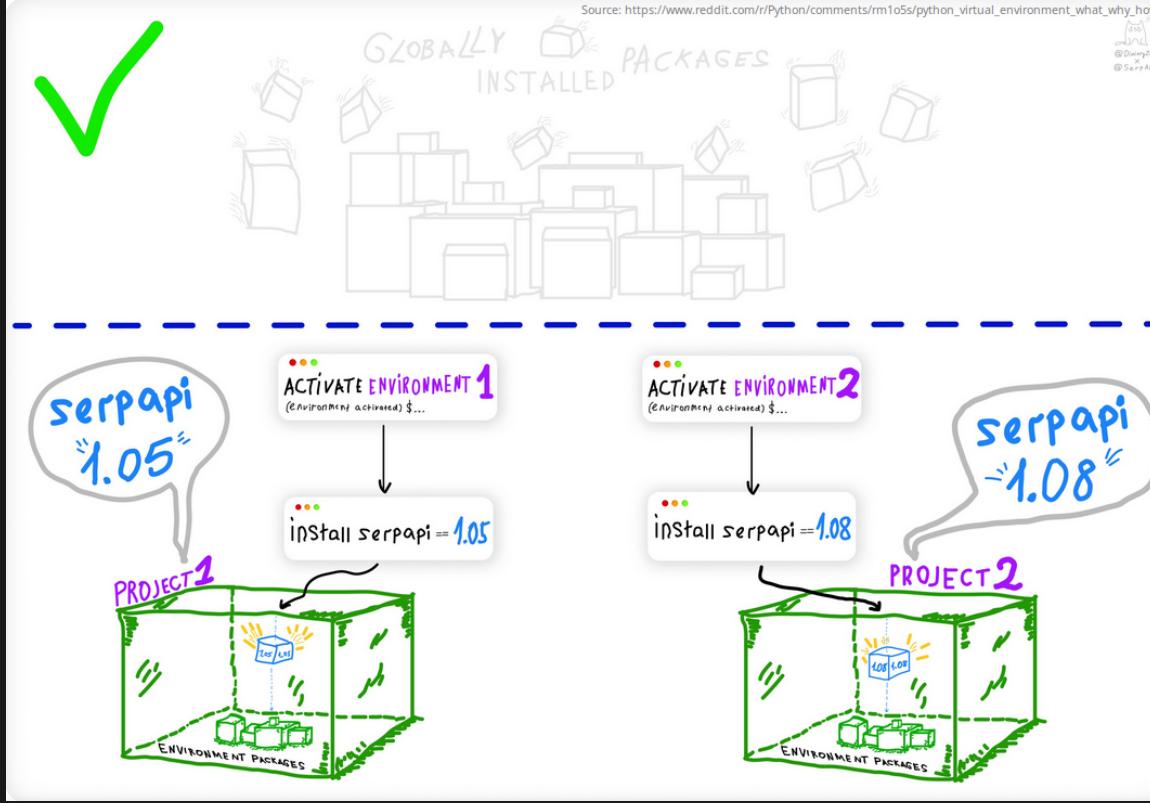
xavier.depedro@seeds4c.org

Aquestes diapositives són disponibles a:

[https://seeds4c.org/renv^{\[5\]}](https://seeds4c.org/renv)

^[6]

[https://rstudio.github.io/renv^{\[7\]}](https://rstudio.github.io/renv)



[8]

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