

Estadística Aplicada y Procesamiento de Datos con R

Código en: 

Clase 4. Tidyverse

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Andrés González Santa Cruz

andres.gonzalezs@mail_udp.cl 

José Ruiz-Tagle Maturana

jose.ruiztagle@mail_udp.cl 

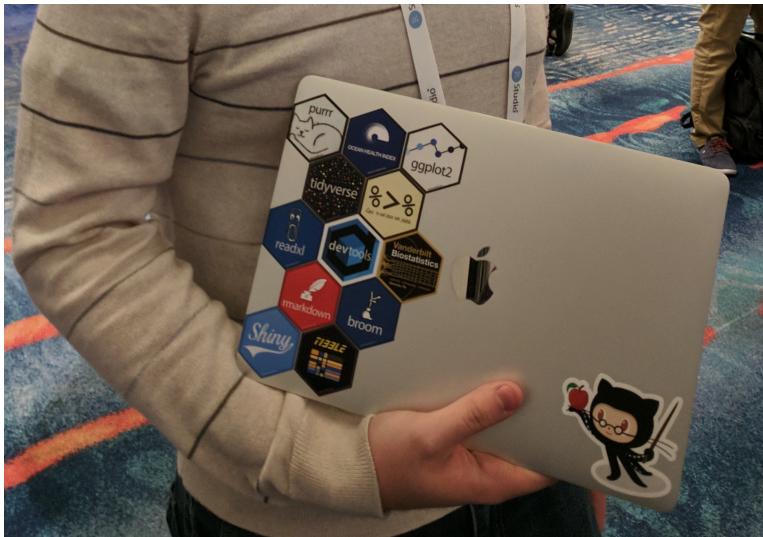
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Bienvenides a Tidyverse

```
if(!require(tidyverse)){install.packages("tidyverse")}
```

- Manipulación de datos. Similitud a PANDAS (Python)
- Flujo de trabajo
- Permite mayor simplicidad en la codificación
- Concatenación (*pipe*)
- Sintaxis entendible
- Similar a manipulación vía SQL
- Desventaja: mucho uso de memoria.



R Memes For Statistical Fiends. (2018, Mayo 02). Found on Twitter <https://twitter.com/leonawicz/status/991400769235468288> [Video]. Facebook. <https://www.facebook.com/watch/?v=1864983323553950>

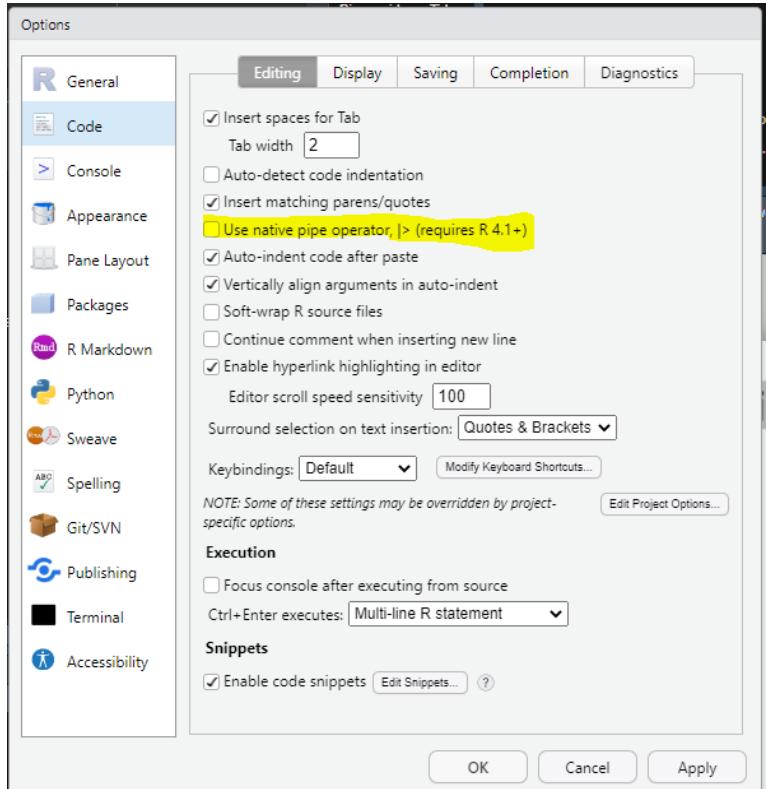
Concatenar acciones

Pipe:

```
magrittr::`%>%`  
|>
```

Más información en: <https://www.tidyverse.org/blog/2023/04/base-vs-magrittr-pipe/>

► código



► código

How mornings look like for most people:

```
me %>%  
  wake_up() %>%  
  get_out_of_bed() %>%  
  get_dressed() %>%  
  leave_house()
```

How my mornings look like most of the time:

```
leave_house(get_dressed(get_out_of_bed(wake_up(me))))
```

Concatenar acciones (2)

► código

► código

Funciones (1)

- Para añadir columnas
 - ▶ código
 - Para seleccionar columnas y filtrar valores
 - ▶ código
 - Conector "o"
 - ▶ código
 - Para filtrar y seleccionar más de una columna
 - ▶ código
- ##[1] 02

Funciones (2)

- Recodificar basado en condiciones

► código

- Usar más de una condición

► código

Funciones (3)

- Resumir la información

► código

► código

Funciones (4)

- Ordenar valores

► código

► código

Funciones (5)

- Unir bases de datos
- ▶ código
 - Vea las diferencias
 - ▶ código

Aplicaciones: Medidas de tendencia central, dispersión y posición

- Modo dplyr
- ▶ código
 - ¿Y por contribuyente?
- ▶ código

Aplicaciones: Tablas

- la manera tidyverse
 - ▶ código

```
asistentes_curso_2020 %>% dplyr::mutate(condicion=factor(condicion),externo= factor(externo)) %>% dplyr::group_by(condicion) %>% #agrupamos  
dplyr::count(externo,drop=FALSE) %>% #contamos los valores distintos de las categorías externo, no descartamos las categorías con valores  
tidyverse::pivot_wider(names_from="externo", values_from = "n") %>% #dejamos los datos para el lado, según interno o externo knitr::kable("markdown")
```

condicion	externo	interno
.	3	0
Académico	0	2
Estudiante	0	1
Estudiante Doctorado	0	3
Funcionario	0	2

- la manera janitor
 - ▶ código

condicion	externo	interno
.	3	0
Académico	0	2
Estudiante	0	1
Estudiante Doctorado	0	3
Funcionario	0	2

Aplicaciones: Tablas de frecuencia

- ▶ código
- ▶ código

y_interval	n	f_i	N_j	F_j
(0.0721,0.581]	41	0.10	41	0.10
(0.581,1.09]	51	0.13	92	0.23
(1.09,1.59]	78	0.20	170	0.42
(1.59,2.09]	72	0.18	242	0.60
(2.09,2.6]	68	0.17	310	0.78
(2.6,3.1]	35	0.09	345	0.86
(3.1,3.6]	18	0.04	363	0.91
(3.6,4.11]	11	0.03	374	0.94
(4.11,4.61]	9	0.02	383	0.96
(4.61,5.12]	1	0.00	384	0.96
NA	16	0.04	400	1.00

]

Ejercicio

- Indique qué se hizo en el siguiente código

.details-code[

```
vacunacion_fabricantes_edad_PrimeraDosis_std <- readr::read_csv("https://raw.githubusercontent.com/MinCiencia/Datos-COVID19/master/output/producto88/vacunacion_fabricantes_edad_1eraDosis_std.csv") %>%  
  dplyr::filter(grep("Pfizer|Sinovac", Fabricante)) %>%  
  dplyr::filter(Edad >= 18 & Edad < 65)
```

##

Rows: 973 Columns: 3
[36m Building [39m Building [8m;file://H:/Mi unidad/Curso_UDP/2023/Clase4.Rmd[34mClase4.Rmd[39m[8m;[into [8m;file://H:/Mi unidad/Curso_UDP/2023/Clase4.html[32mClase4.html[39m[8m;[
[36m Building [39m Building [8m;file://H:/Mi unidad/Curso_UDP/2023/Clase4.Rmd[34mClase4.Rmd[39m[8m;[into [8m;file://H:/Mi unidad/Curso_UDP/2023/Clase4.html[32mClase4.html[39m[8m;[
[36m Building [39m Building [8m;file://H:/Mi unidad/Curso_UDP/2023/Clase4.Rmd[34mClase4.Rmd[39m[8m;[into [8m;file://H:/Mi unidad/Curso_UDP/2023/Clase4.html[32mClase4.html[39m[8m;[

-- Column specification -----
[36m Building [39m Building [8m;file://H:/Mi unidad/Curso_UDP/2023/Clase4.Rmd[34mClase4.Rmd[39m[8m;[into [8m;file://H:/Mi unidad/Curso_UDP/2023/Clase4.html[32mClase4.html[39m[8m;[

Delimiter: ":"
chr (1): Fabricante
dbl (2): Edad, Primera Dosis
[36m Building [39m Building [8m;file://H:/Mi unidad/Curso_UDP/2023/Clase4.Rmd[34mClase4.Rmd[39m[8m;[into [8m;file://H:/Mi unidad/Curso_UDP/2023/Clase4.html[32mClase4.html[39m[8m;[
[36m Building [39m Building [8m;file://H:/Mi unidad/Curso_UDP/2023/Clase4.Rmd[34mClase4.Rmd[39m[8m;[into [8m;file://H:/Mi unidad/Curso_UDP/2023/Clase4.html[32mClase4.html[39m[8m;[
[36m Building [39m Building [8m;file://H:/Mi unidad/Curso_UDP/2023/Clase4.Rmd[34mClase4.Rmd[39m[8m;[into [8m;file://H:/Mi unidad/Curso_UDP/2023/Clase4.html[32mClase4.html[39m[8m;[

i Use `spec()` to retrieve the full column specification for this data.
[36m Building [39m Building [8m;file://H:/Mi unidad/Curso_UDP/2023/Clase4.Rmd[34mClase4.Rmd[39m[8m;[into [8m;file://H:/Mi unidad/Curso_UDP/2023/Clase4.html[32mClase4.html[39m[8m;[

i Specify the column types or set `show_col_types = FALSE` to quiet this message.
[36m Building [39m Building [8m;file://H:/Mi unidad/Curso_UDP/2023/Clase4.Rmd[34mClase4.Rmd[39m[8m;[into [8m;file://H:/Mi unidad/Curso_UDP/2023/Clase4.html[32mClase4.html[39m[8m;[

]

- Traduzca **table** en lenguaje tidyverse

► código

```
##  
## A B  
## acuario 8 10  
## escorpión 6 2  
## leo 4 10  
## piscis 5 8  
## sagitario 7 7  
## virgo 7 4
```

Ejercicio 2

- Cargue la base de datos "starwars"
- (Podría faltar el paquete magrittr, si el programa se lo pide, ¿sabría cómo instalarlo?)
- Ejecute este código: `starwars %>% dplyr::group_by(eye_color) %>% dplyr::summarise(promedio_altura_por_color_de_ojos=mean(height, na.rm=T))`
- Conversemos sobre lo que hizo

Ejercicio 3

- Importar `bbdd_prueba.csv` (https://raw.githubusercontent.com/AGSCL/udp_2023/main/_data/bbdd_prueba1.csv)
- Complete la guía de ejercicios

Gracias!

Contacto: CANVAS

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