Funciones. Técnicas para la Visualización de Datos

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EJERCICIO A ENTREGAR

Llega a la siguiente visualización:

```
install.packages("dplyr", repos = "http://cran.us.r-project.org")
```

```
##
## The downloaded binary packages are in
##  /var/folders/c5/439vc1vn1vgcxz0298jb5xm80000gn/T//RtmpFdYjVV/download
ed_packages
```

```
install.packages("ggplot2", repos = "http://cran.us.r-project.org")
```

```
##
## The downloaded binary packages are in
##  /var/folders/c5/439vc1vn1vgcxz0298jb5xm80000gn/T//RtmpFdYjVV/download
ed_packages
```

```
install.packages("tidyverse", repos = "http://cran.us.r-project.org")
```

```
##
## The downloaded binary packages are in
##  /var/folders/c5/439vc1vn1vgcxz0298jb5xm80000gn/T//RtmpFdYjVV/download
ed_packages
```

```
library(dplyr)
```

```
##
## Attaching package: 'dplyr'
```

```
## The following objects are masked from 'package:stats':
##
##     filter, lag
```

```
## The following objects are masked from 'package:base':
##
##     intersect, setdiff, setequal, union
```

```
library(ggplot2)
library(tidyverse)
```

```
## ── Attaching packages
## ─────────────────────────────────────
## tidyverse 1.3.2 ──
```

```
## ✓ tibble  3.1.8     ✓ purrr   0.3.5
## ✓ tidyr   1.2.1     ✓ stringr 1.4.1
## ✓ readr   2.1.3     ✓ forcats 0.5.2
## ── Conflicts ──────────────────────────────────────── tidyverse_conf
licts() ──
## ✖ dplyr::filter() masks stats::filter()
## ✖ dplyr::lag()    masks stats::lag()
```

```
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# Funciones para pintar los dos huecos de P
pintar1 <- function(x){ y <- dnorm(x)
  y[x>(-0.5) | x<(-1)] <- NA
  return(y)
}
# P(-0,5<X<0)
pintar2 <- function(x){
  y <- dnorm(x)
  y[x<0.5 | x>1] <- NA
  return(y) }

ggplot(data.frame(x=c(-2,2)),aes(x=x))+
  stat_function(fun=dnorm, lty=2)+
    geom_segment(x =0, y = 0,xend = 0, yend = 0.4, lty=1,color="red",lwd=
0.5)+
    geom_hline(yintercept = 0, color = "red", lwd = 1, lty = 1)+
    stat_function(fun = pintar2, geom = "area", fill = "blue")+
    stat_function(fun = pintar1, geom = "area", fill = "pink")+
    stat_function(fun = dnorm, args = list(mean = 1, sd = 1))+
    geom_segment(x =1, y = 0,xend = 1, yend = 0.4, linetype=1,color ="bla
ck",lwd=0.5)+
    annotate("text", x = -1, y = 0.35, label = "P(-0,5<X<0)", colour = "b
lack", size =3)+
    theme(axis.text.x= element_text(colour = "blue",size=10,angle = 90),
axis.text.y= element_text(colour = "blue",size=8), axis.title.x= element_
text(size=8, face="bold"), axis.title.y= element_text(size=8, face="bold"
),
plot.title = element_text( size = 10, hjust=0.01,face="bold"), axis.ticks
.y = element_blank(),
panel.background = element_blank())+

# flecha
annotate('curve', x=-1, y=0.34, xend=-1, yend=0.15, color='red',curvature
=0.5,arrow = arrow(length = unit(0.03, "npc")))+

# Titulos
ggtitle('Distribución Normal')+
    theme(plot.title = element_text(hjust = 0.5))+ #centrar titulo del gr
afico
    xlab('Valores de x')+
    ylab('Probabilidad')

## Warning: Using `size` aesthetic for lines was deprecated in ggplot2 3.
4.0.
## ℹ Please use `linewidth` instead.
```

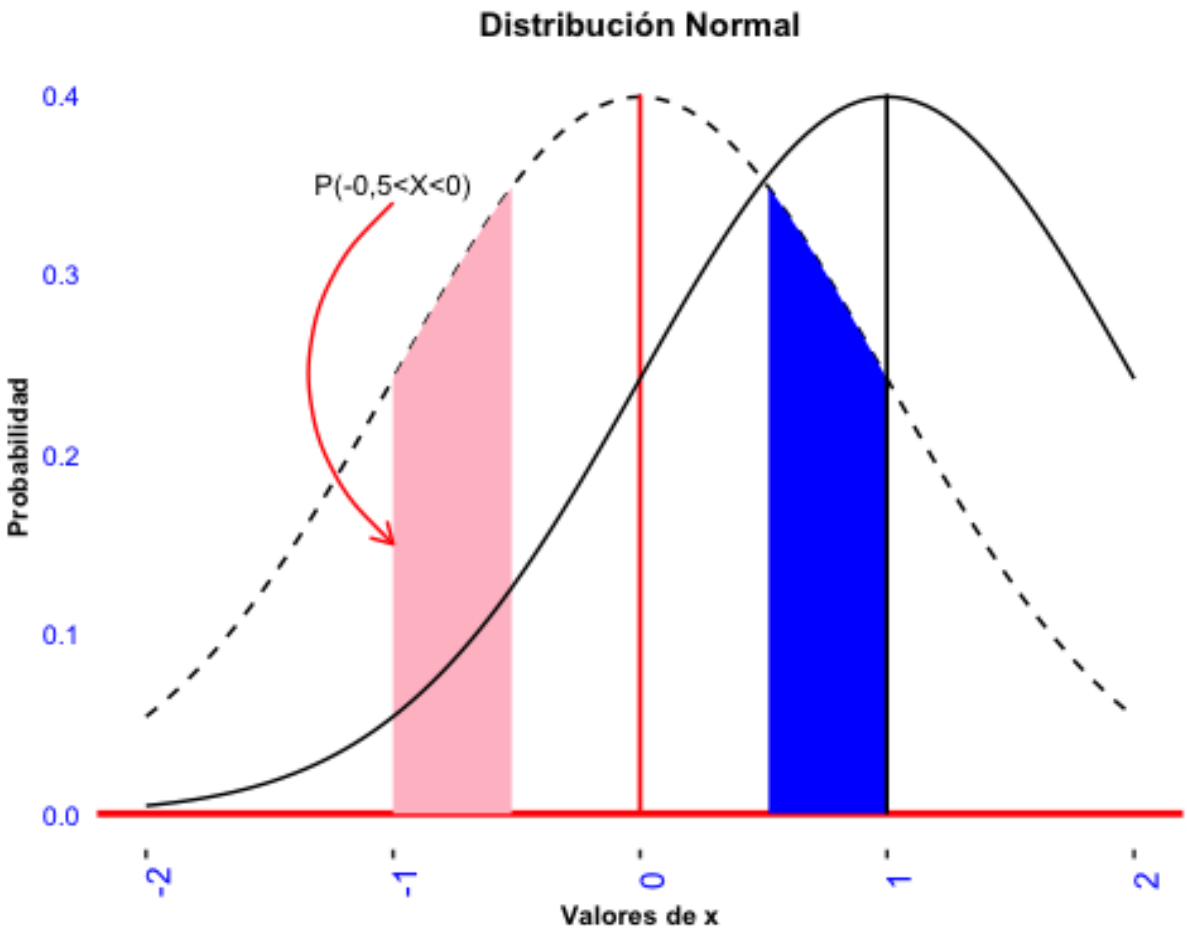
Distribución Normal
P(-0,5<X<0)
Probabilidad
0.4
0.3
0.2
0.1
0.0
-2
-1
0
1
2
Valores de x