A TEMPLATE FOR THE *ARXIV* STYLE

A PREPRINT

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Abstract

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***K*eywords** blah · blee · bloo · these are optional and can be removed

##Vectores

Un vector es una estructura de datos que almacena numeros de doble presicion

```
mi_vector_a <- c(12,64,12,54,23,12,65,34,12,56,66)
mi_vector_b <- seq(1:16)

mi_vector_a
```

```
##  [1] 12 64 12 54 23 12 65 34 12 56 66
```

```
mi_vector_b
```

```
##  [1]  1  2  3  4  5  6  7  8  9 10 11 12 13 14 15 16
```

0.1 Matrices

Las matrices se aprecen a los vectores, pero tienen filas y columnas. Se alimentan de vectores

```
mi_matriz_c <- matrix(mi_vector_b, nrow=4 , byrow=FALSE)
mi_matriz_c
```

```
##      [,1] [,2] [,3] [,4]
## [1,]    1    5    9   13
## [2,]    2    6   10   14
## [3,]    3    7   11   15
## [4,]    4    8   12   16
```

Para acceder a un elemento de la matriz uso de las filas y columnas entre corchetes.

```
mi_matriz_c[2,3]
```

```
## [1] 10
```

*Use footnote for providing further information about author (webpage, alternative address)—*not* for acknowledging funding agencies. Optional.

¿Como traer la fila 4 completa?

```
mi_matriz_c[4, ]
```

```
## [1]  4  8 12 16
```

```
mi_matriz_c[ ,1]
```

```
## [1] 1 2 3 4
```

¿Qué hará este comando?

```
mi_matriz_c[ -2, ]
```

```
##      [,1] [,2] [,3] [,4]
## [1,]    1    5    9   13
## [2,]    3    7   11   15
## [3,]    4    8   12   16
```

¿Cómo Trae toda la matriz manos la columna 2?

```
mi_matriz_c[,-2]
```

```
##      [,1] [,2] [,3]
## [1,]    1    9   13
## [2,]    2   10   14
## [3,]    3   11   15
## [4,]    4   12   16
```

```
Start_time <- Sys.time()

Vector_c <-seq(1,1000)
matriz_c <-matrix(Vector_c, nrow=100, byrow=TRUE)
end_time <- Sys.time()
Tiempo_total <- end_time - Start_time
print(paste("Tiempo total", Tiempo_total))
```

```
## [1] "Tiempo total 0.00200438499450684"
```