Analisis_lab1

2025-02-06

Analisis naive search v binary search

Se cargan los datos medidos

```
library(readr)
results <- read_csv("C:/Users/Sonyvideo1/Programas
Personales/clase_analisis_algoritmos/lab1/results.csv")

## Rows: 60 Columns: 3
## ── Column specification
────────────────────────────────────────────────────────
## Delimiter: ","
## dbl (3): n, naive, binary
##
## ℹ Use `spec()` to retrieve the full column specification for this
data.
## ℹ Specify the column types or set `show_col_types = FALSE` to quiet
this message.

results

## # A tibble: 60 × 3
##        n    naive   binary
##    <dbl>    <dbl>    <dbl>
##  1   100 0        0
##  2   100 0.00500  0
##  3   100 0        0
##  4   100 0.000996 0.00100
##  5   100 0        0.00100
##  6   100 0.000998 0.00101
##  7   100 0.000999 0.000995
##  8   100 0.00100  0
##  9   100 0        0
## 10   100 0        0.00587
## # ℹ 50 more rows
```

Se calculan las medias de los algoritmos para los tamaños n

```
medias_por_n <- aggregate(. ~ n, data = results, FUN = mean)
medias_por_n

##     n        naive       binary
## 1 100 0.0008999586 0.0009874105
## 2 200 0.0045328617 0.0029238462
## 3 300 0.0017807484 0.0012571812
```

```
## 4 400 0.0009668827 0.0006894588
## 5 500 0.0028706312 0.0024353266
## 6 600 0.0046893358 0.0067376137
```

Se calculan las frecuencias

```r
plot(medias_por_n$n, medias_por_n$naive, type = "o", col = "blue", pch =
16,
     xlab = "n", ylab = "Media", main = "Media de naive y binary por n",
     ylim = range(c(medias_por_n$naive, medias_por_n$binary)))

# Agregar binary al mismo gráfico
lines(medias_por_n$n, medias_por_n$binary, type = "o", col = "red", pch =
16)

# Agregar leyenda
legend("topright", legend = c("naive", "binary"), col = c("blue", "red"),
pch = 16, lty = 1)
```