**BIG DATA & MACHINE LEARNING**

**Trabajo Práctico N° 4**

**Métodos Supervisados: Regresión & Clasificación usando la EHP**

*Parte A:*

1)

**2004**

|  |  |  |  |
| --- | --- | --- | --- |
| Variables | Media Train | Media Test | Diferencia |
| CH06 | 33.451076 | 34.050611 | -0.599535 |
| NIVEL\_ED | 2.691113 | 2.661867 | 0.029246 |
| IPCF | 358.227007 | 373.852669 | -15.625662 |
| CH04 | 1.532647 | 1.520942 | 0.011705 |
| CH07 | 3.512067 | 3.456370 | 0.055697 |

**2024**

|  |  |  |  |
| --- | --- | --- | --- |
| Variables | Media Train | Media Test | Diferencia |
| CH06 | 38.205544 | 38.105314 | 0.100231 |
| NIVEL\_ED | 3.832892 | 3.849263 | -0.016371 |
| IPCF | 165539.752107 | 150432.498954 | 15107.253153 |
| CH04 | 1.518647 | 1.533999 | -0.015352 |
| CH07 | 3.431424 | 3.436519 | -0.005095 |

*Parte B:*

2)

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Var Dep: Salario Semanal | Modelo 1 | Modelo 2 | Modelo 3 | Modelo 4 | Modelo 5 |
| Variables | 1 | 2 | 3 | 4 | 5 |
| Edad | 1023.953\*\*\* (196.93) | 8286.717\*\*\* (1082.10) | 8534.898\*\*\* (1045.06) | 9276.996\*\*\* (1023.47) | 9487.966\*\*\* (972.59) |
| Edad2 |  | -83.879 \*\*\* (12.29) | -81.887 \*\*\* (11.87) | -89.977 \*\*\* (11.62) | -87.881 \*\*\* (11.00) |
| Educ |  |  | 10470.562 \*\*\* (657.91) | 11381.397 \*\*\* (647.25) | 14622.772 \*\*\* (631.32) |
| Mujer |  |  |  | -65231.176 \*\*\* (5134.86) | -61495.312 \*\*\* (4837.16) |
| CH11 |  |  |  |  | 1996.553 (1617.27) |
| CH09 |  |  |  |  | -104097.032 \*\*\* (5083.11) |
| N(Observaciones) | 3488 | 3488 | 3488 | 3488 | 3488 |
| R2 | 0.008 | 0.021 | 0.087 | 0.128 | 0.228 |

Nota: destaque con \*, \*\*, y \*\*\* cuando el p-valor de los coeficientes reportados sean menor que 0.1, 0.05 y 0.001 respectivamente.

3)

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Var Dep: Salario Semanal | Modelo 1 | Modelo 2 | Modelo 3 | Modelo 4 | Modelo 5 |
| Variables | 1 | 2 | 3 | 4 | 5 |
| MSE | 450157e+11 | 443898e+11 | 418411e+11 | 406124e+11 | 369515e+11 |
| RMSE | 380809.271280 | 379986.629640 | 376617.979429 | 374983.135157 | 370069.648701 |
| MAE | 104537.118639 | 103508.467708 | 100291.055788 | 98721.840874 | 90692.702781 |

4)