HIPER PARAMETROS OPTIMIZADOS

**PROPHET**

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| **df** | **best\_params** |
| CHU\_COPA\_AJUST | {'changepoint\_prior\_scale': 0.1, 'seasonality\_prior\_scale': 0.01, 'daily\_seasonality': True, 'yearly\_seasonality': True, 'holidays\_prior\_scale': 0.01, 'seasonality\_mode': 'additive', 'changepoint\_range': 0.8} |
| CHU\_REC\_PROPIOS\_AJUST | {'changepoint\_prior\_scale': 0.001, 'seasonality\_prior\_scale': 10.0, 'daily\_seasonality': True, 'yearly\_seasonality': True, 'holidays\_prior\_scale': 0.01, 'seasonality\_mode': 'additive', 'changepoint\_range': 0.9} |
| CHU\_REGALIAS\_AJUST | {'changepoint\_prior\_scale': 0.5, 'seasonality\_prior\_scale': 0.1, 'daily\_seasonality': True, 'yearly\_seasonality': False, 'holidays\_prior\_scale': 0.01, 'seasonality\_mode': 'multiplicative', 'changepoint\_range': 0.8} |

**PROPHET FOURIER ORDER**

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| **df** | **Fourier\_yearly** | **Fourier\_monthly** |
| CHU\_COPA\_AJUST | {'fourier\_order': 5, 'rmse': 2114568.5994672766} | {'fourier\_order': 3, 'rmse': 1829278.0979960766} |
| CHU\_REC\_PROPIOS\_AJUST | {'fourier\_order': 10, 'rmse': 1241865.2497155124} | {'fourier\_order': 3, 'rmse': 1160714.3127307887} |
| CHU\_REGALIAS\_AJUST | {'fourier\_order': 3, 'rmse': 6054561.279307909} | {'fourier\_order': 3, 'rmse': 5786977.886510033} |

**XGBOOST**

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| **df** | **best\_params** |
| CHU\_COPA\_AJUST | {'n\_estimators': 453, 'learning\_rate': 0.052251207169970344, 'max\_depth': 3, 'min\_child\_weight': 2, 'subsample': 0.9052659212939362, 'colsample\_bytree': 0.9700609066338445, 'gamma': 0.4972981188401708, 'reg\_alpha': 0.49902287558195313, 'reg\_lambda': 1.390212005740913} |
| CHU\_REC\_PROPIOS\_AJUST | {'n\_estimators': 370, 'learning\_rate': 0.07063010235445233, 'max\_depth': 7, 'min\_child\_weight': 4, 'subsample': 0.6846124207200684, 'colsample\_bytree': 0.7520959246442501, 'gamma': 0.34727747835872463, 'reg\_alpha': 0.10152547979284736, 'reg\_lambda': 1.4618068656153174} |
| CHU\_REGALIAS\_AJUST | {'n\_estimators': 500, 'learning\_rate': 0.09909913615269426, 'max\_depth': 7, 'min\_child\_weight': 2, 'subsample': 0.708172616764662, 'colsample\_bytree': 0.9508794978508508, 'gamma': 0.49887376061225946, 'reg\_alpha': 0.26891921056341245, 'reg\_lambda': 0.5637625884315804} |

**LIGHTGBM**

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| **df** | **best\_params** |
| CHU\_COPA\_AJUST | {'n\_estimators': 1670, 'learning\_rate': 0.05434009138012196, 'max\_depth': 9, 'num\_leaves': 43, 'min\_child\_samples': 27, 'subsample': 0.9577724287559277, 'colsample\_bytree': 0.8076995248364037, 'reg\_alpha': 0.014464297652987318, 'reg\_lambda': 0.6299036642292266} |
| CHU\_REC\_PROPIOS\_AJUST | {'n\_estimators': 1236, 'learning\_rate': 0.048922724434304524, 'max\_depth': 8, 'num\_leaves': 79, 'min\_child\_samples': 33, 'subsample': 0.7343992892058865, 'colsample\_bytree': 0.5125884353625726, 'reg\_alpha': 0.09322166284457188, 'reg\_lambda': 0.7334602723962557} |
| CHU\_REGALIAS\_AJUST | {'n\_estimators': 1330, 'learning\_rate': 0.09969430566201748, 'max\_depth': 9, 'num\_leaves': 42, 'min\_child\_samples': 10, 'subsample': 0.5086757934277606, 'colsample\_bytree': 0.8651927912102433, 'reg\_alpha': 0.40673825228466354, 'reg\_lambda': 0.012809939668950783} |