The result for optimization was among:

'objective': ['regression'],

'num\_leaves': [31, 50, 70, 100],

'learning\_rate': [0.001, 0.01, 0.1],

'n\_estimators': [100, 200, 500]

Shows:

Model for hour 23 saved successfully at ./ModelForEachForecastHorizon/lightgbm\_model\_hour\_23.pkl

Hour: 23, Mean Squared Error: 13.044485105622506, Mean Absolute Error: 2.2971384888097295

I ran this model:  
objective='regression',

num\_leaves=70,

learning\_rate=0.1,

n\_estimators=1000)

the result:

A graph with a red line and blue dotted line

Description automatically generated

A graph showing a line graph

Description automatically generated with medium confidenceA graph showing a line of different colored lines

Description automatically generated with medium confidence

A graph with lines and numbers

Description automatically generated with medium confidenceA graph with different colored lines

Description automatically generated

A graph with a line in different colors

Description automatically generated with medium confidenceA graph showing a graph showing a graph

Description automatically generated with medium confidence