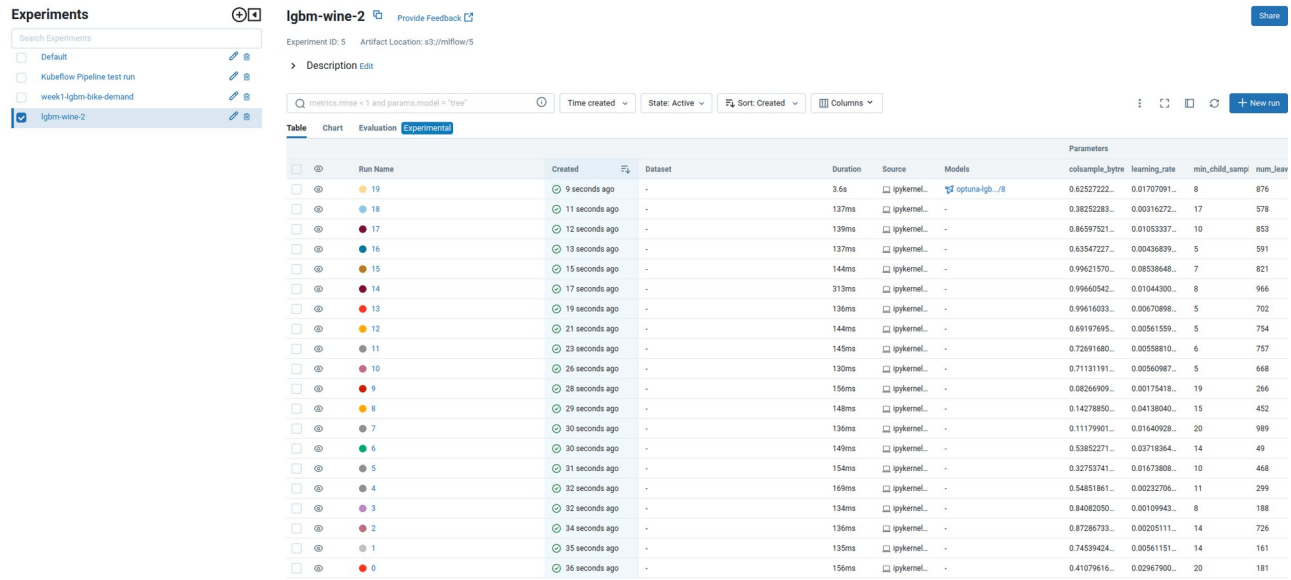
2. b)
In the plots, the three most important hyperparameters are colsample_bytree, min_child_samples and subsample. colsample_bytree and subsample have values concerntrated to the upper end of the scale where min_child_samples are in the lower end. Thus, to adjust the search ranges for these hyperparameters I would increase the higher limit of colsample_bytree and subsample and decrease the lower limit of min_child_samples.

2. c)



3. b)