So XGBoost optimization is public as well: <u>Numerai XGBoost Hyperparameter Search with Optuna | Kaggle</u> It is not fully comparable to <u>Numerai LightGBM Hyperparameter Search with Optuna | Kaggle</u>because learning rate

is sampled from log distribution, but some interesting observations can be made:

• better general performance than LGBM (although learning\_rate

sampling might play a role

- · needs more trees
- · colsample bytree

higher than with LGBM which is higher than recommended 0.1 (might be influenced by number of features - we play on Kaggle with medium feature set)

Both LGBM and XGB could not use T4 x 2 GPU Kaggle accelerator (or precisely was using only 1 GPU core for calculations) and CatBooost is using both cores (should be faster) next week, when my Kaggle GPU quota will be replenished, I will do fork for CatBoost.