Model Metrics

# Features

Graphical user interface, text

Description automatically generated with medium confidence

# 2.0 Model Parameters and Hyperparameters

**Untuned CatBoostRegressor:**

|  |  |
| --- | --- |
| **nan\_mode** | Min |
| **eval\_metric** | RMSE |
| **iterations** | 1000 |
| **sampling\_frequency** | PerTree |
| **leaf\_estimation\_method** | Newton |
| **grow\_policy** | SymmetricTree |
| **penalties\_coefficient** | 1 |
| **boosting\_type** | Plain |
| **model\_shrink\_mode** | Constant |
| **feature\_border\_type** | GreedyLogSum |
| **bayesian\_matrix\_reg** | 0.10000000149011612 |
| **force\_unit\_auto\_pair\_weights** | False |
| **l2\_leaf\_reg** | 3 |
| **random\_strength** | 1 |
| **rsm** | 1 |
| **boost\_from\_average** | True |
| **model\_size\_reg** | 0.5 |
| **pool\_metainfo\_options** | {'tags': {}} |
| **subsample** | 0.800000011920929 |
| **use\_best\_model** | False |
| **random\_seed** | 123 |
| **depth** | 6 |
| **posterior\_sampling** | False |
| **border\_count** | 254 |
| **classes\_count** | 0 |
| **auto\_class\_weights** | None |
| **sparse\_features\_conflict\_fraction** | 0 |
| **leaf\_estimation\_backtracking** | AnyImprovement |
| **best\_model\_min\_trees** | 1 |
| **model\_shrink\_rate** | 0 |
| **min\_data\_in\_leaf** | 1 |
| **loss\_function** | RMSE |
| **learning\_rate** | 0.03585800155997276 |
| **score\_function** | Cosine |
| **task\_type** | CPU |
| **leaf\_estimation\_iterations** | 1 |
| **bootstrap\_type** | MVS |
| **max\_leaves** | 64 |

**Light Gradient Boosting Machine**

|  |  |
| --- | --- |
| **boosting\_type** | gbdt |
| **class\_weight** | None |
| **colsample\_bytree** | 1.0 |
| **importance\_type** | split |
| **learning\_rate** | 0.3 |
| **max\_depth** | 4 |
| **min\_child\_samples** | 20 |
| **min\_child\_weight** | 0.001 |
| **min\_split\_gain** | 0.0 |
| **n\_estimators** | 100 |
| **n\_jobs** | -1 |
| **num\_leaves** | 8 |
| **objective** | None |
| **random\_state** | 123 |
| **reg\_alpha** | 0.0 |
| **reg\_lambda** | 0.0 |
| **silent** | warn |
| **subsample** | 1.0 |
| **subsample\_for\_bin** | 200000 |
| **subsample\_freq** | 0 |

**Extra Trees Regressor:**

|  |  |
| --- | --- |
| **bootstrap** | False |
| **ccp\_alpha** | 0.0 |
| **criterion** | squared\_error |
| **max\_depth** | 20 |
| **max\_features** | auto |
| **max\_leaf\_nodes** | None |
| **max\_samples** | None |
| **min\_impurity\_decrease** | 0.0 |
| **min\_samples\_leaf** | 1 |
| **min\_samples\_split** | 3 |
| **min\_weight\_fraction\_leaf** | 0.0 |
| **n\_estimators** | 50 |
| **n\_jobs** | -1 |
| **oob\_score** | False |
| **random\_state** | 123 |
| **verbose** | 0 |
| **warm\_start** | Fal |

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Table

Description automatically generated