

Autotuning for LightGBM in SAS Model Studio

1. Go to SAS Model Studio
2. Click *New project*
3. Give the project a name, e.g. *HMEQ LightGBM Autotune*
4. As the type select *Data Mining and Machine Learning*
5. As the template select *Blank template*
6. For data select the HMEQ dataset that can be created with the [Load HMEQ Utility script](#)
7. Click *Save*
8. In the *Data* tab select the variable *BAD* and change its role to *Target*
9. Go to the pipelines tab, right click the *Data* node and select *Add child node > Supervised Learning > Gradient Boosting*
10. Check the *Perform LightGBM* box and toggle *Perform Autotuning*

Run pipeline

Gradient Boosting

Description:
Fits a gradient boosting model, which builds a sequential series of decision trees.

- ☒ Perform LightGBM
 - > Basic Options
 - > Tree-splitting Options
 - ☒ Perform Autotuning
 - > Bagging Frequency Rate
 - > Bagging Fraction Rate
 - > L1 Regularization
 - > L2 Regularization
 - > Learning Rate
 - > Maximum Depth
 - > Minimum Leaf Size
 - > Number of Interval Bins
 - > Number of Trees
 - > Proportion of Inputs per ...
 - > Search Options
 - > Lookup and History Options
 - > General Options

Autotuning Parameters

11. If you want to can adjust the Autotuning parameters for more information check the [SAS documentation](#)

12. Click *Run pipeline*, wait for the pipeline to finish and take a look at the results