







**GBM Parameters: Boosting**

- **learn\_rate:** boosting factor, eta (default=0.1)
- **learn\_rate\_annealing:** factor by which to reduce the learn\_rate every tree (default=1)

# GBM Parameters: Class Imbalances

(same as RF)

- **balance\_classes**: balance training data class counts via over/under-sampling (default: False)
- **class\_sampling\_factors**: desired over/under-sampling ratios per class (in lexicographic order). If not specified, sampling factors will be automatically
- **max\_after\_balance\_size**: maximum relative size of the training data after balancing class counts (can be less than 1.0). Requires balance classes. Defaults to 5.0.
- **sample\_rate\_per\_class**: variable row sampling rate per class

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