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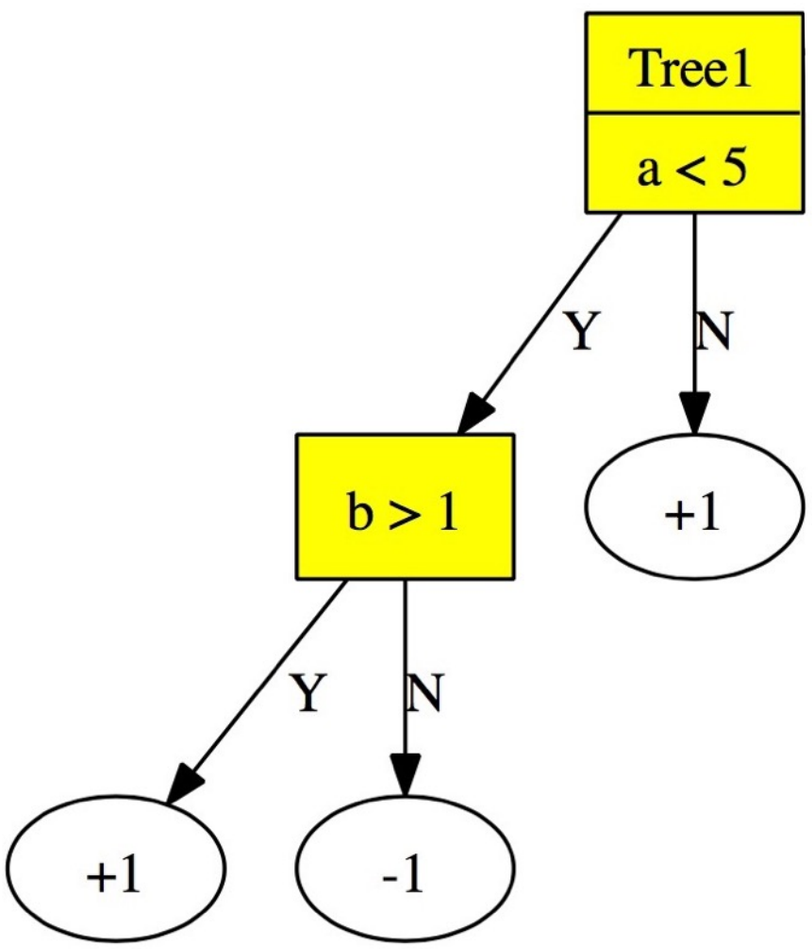
  - We will restrict our attention to binary classification, but there are solutions for multi class and for regression.

An Ensemble of trees



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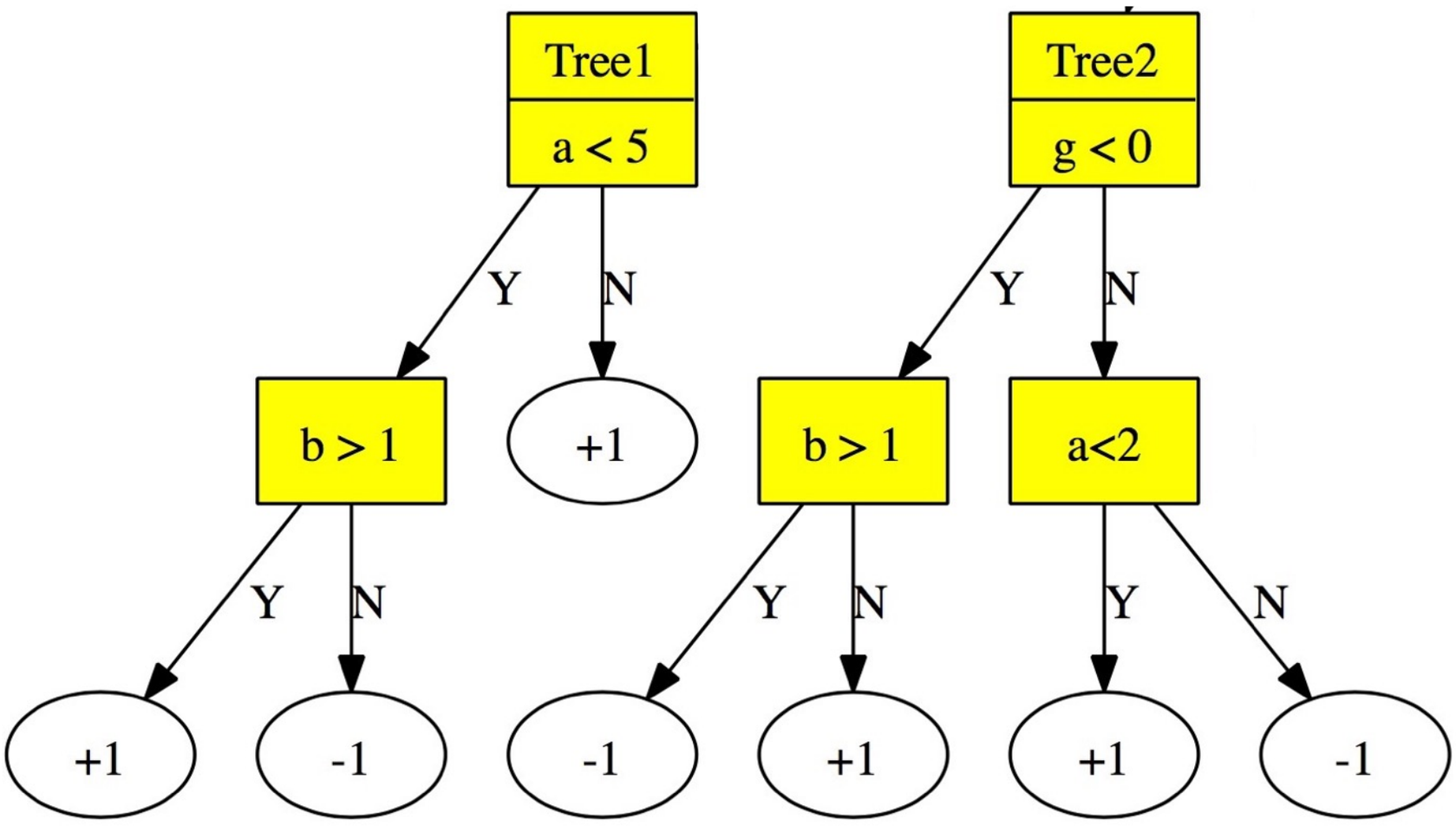

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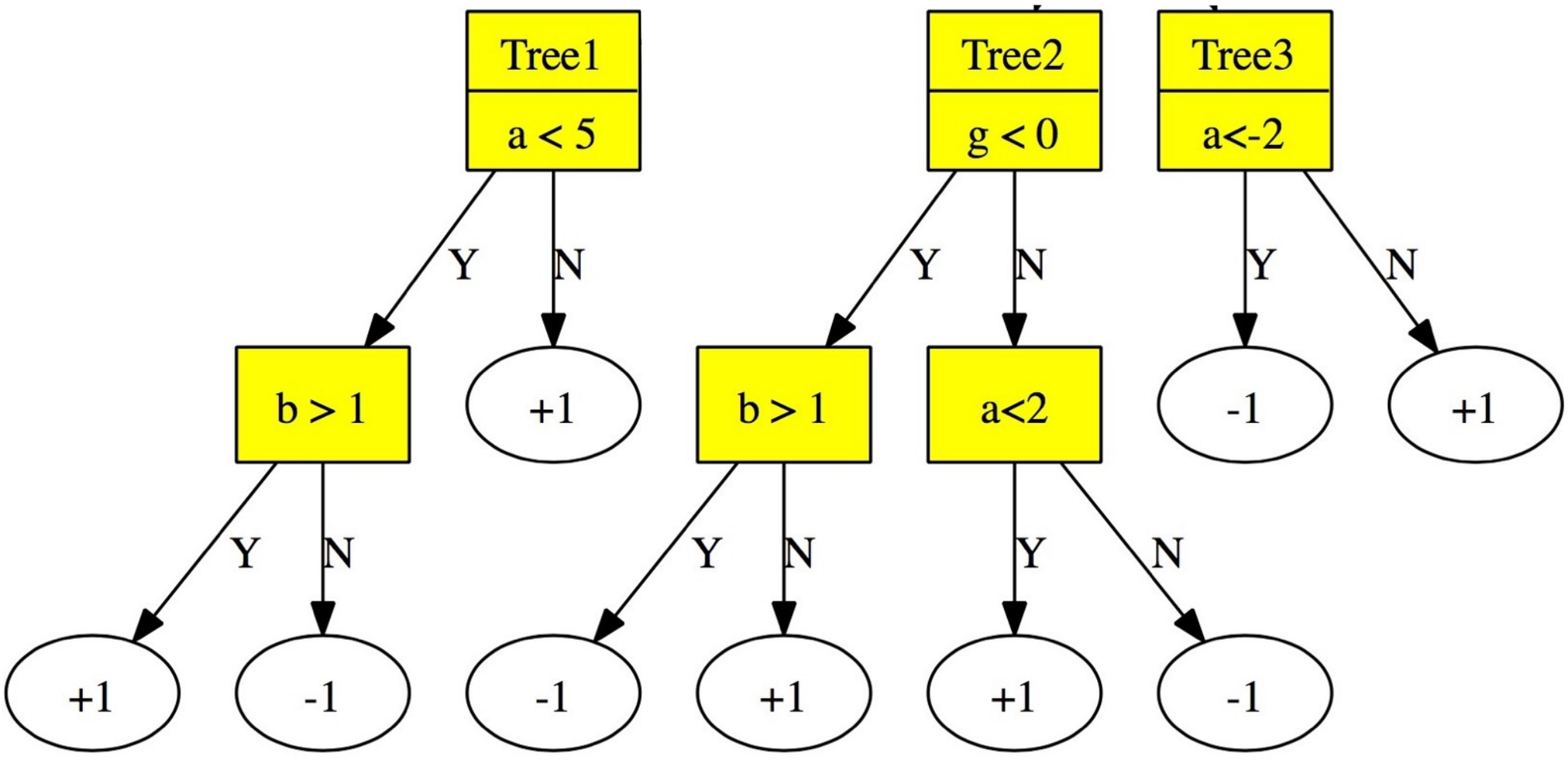

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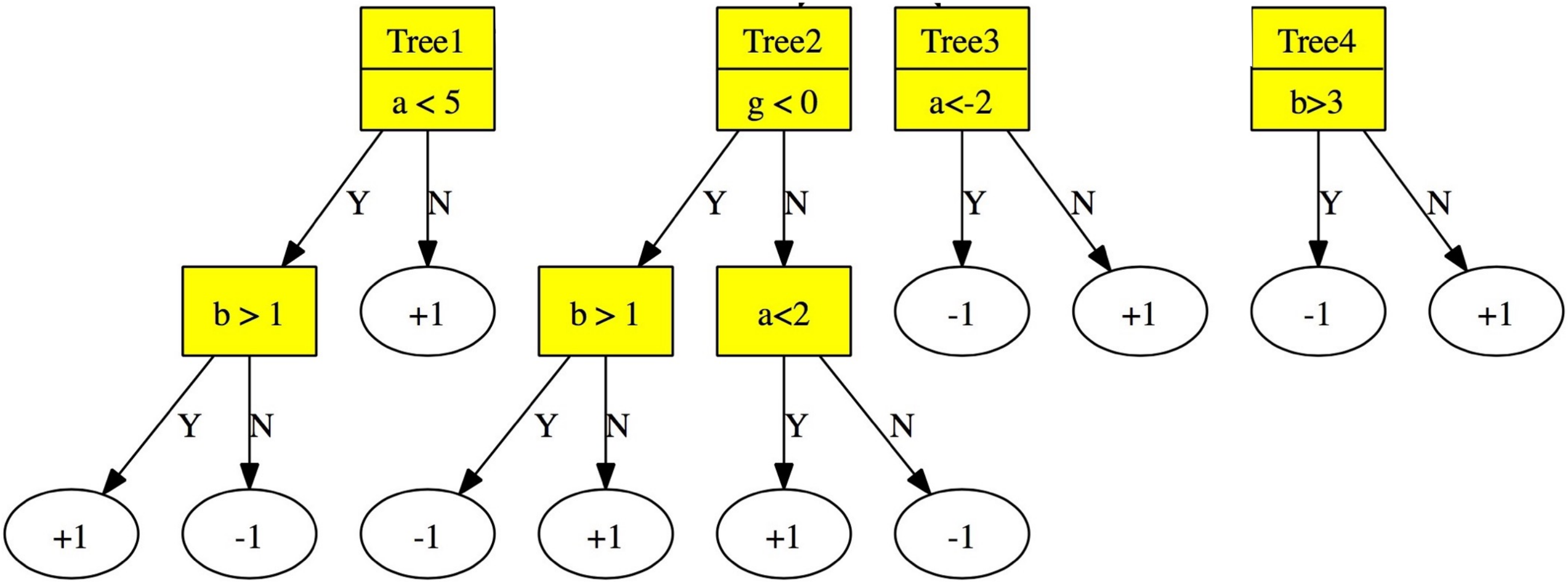

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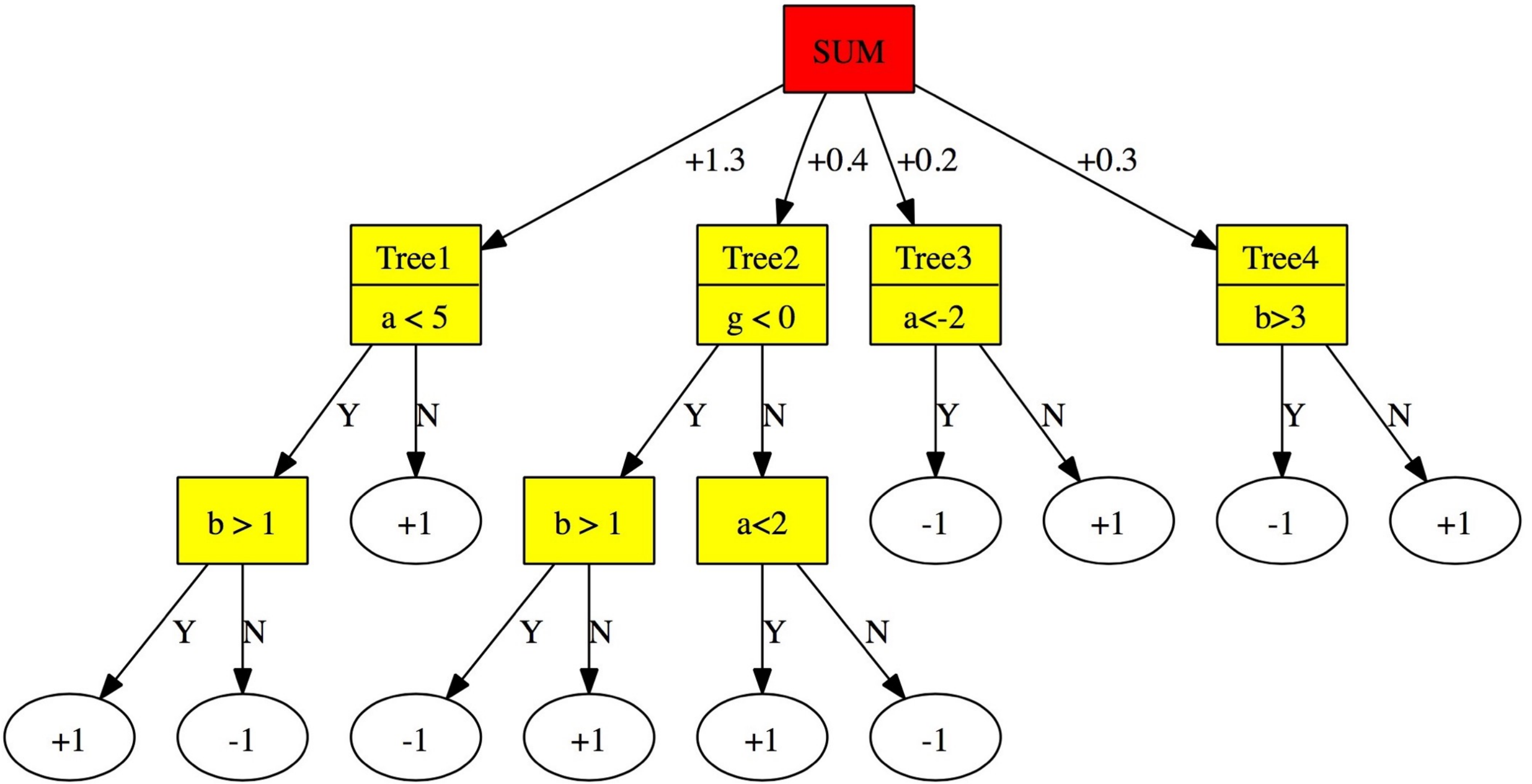

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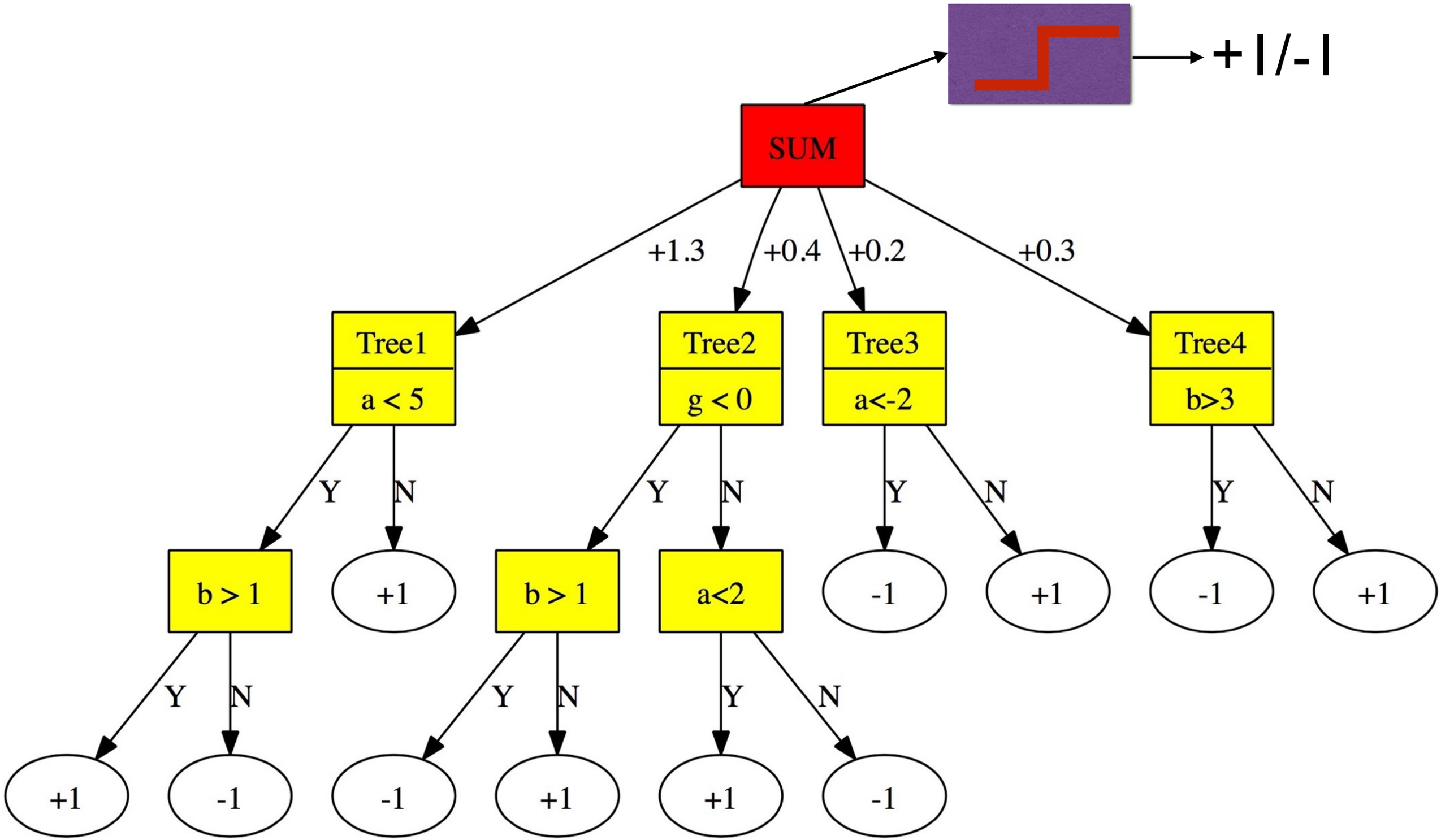

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- The result is a reduction in variation with no increase

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- Stochastic gradient boosting: use random resampling of the training set a.k.a. Bagging.