

An introduction to insurance pricing models and in particular tree-based machine learning models

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Abstract

During this presentation, I will talk about a well-known algorithm in the insurance sphere: the GBM (gradient boosting model) and then go on to talk about a model recently developed in a paper in collaboration with Professor Julien Trufin and Professor Michel Denuit called ABT (adaptive boosting trees). This new boosting machine is based on forward stagewise additive modeling with cost-complexity pruned trees. In the Tweedie case, it deals directly with observed responses, not gradients of the loss function. I will also discuss a bit about the fairness of machine learning in insurance.