**E12 - Gradient Boosting Review**

The Gradient Boosting is a widely-known model for classification and regression in Machine learning, it uses the concept grouping the predictions of weak models to get an ensemble of predictions, it builds the model by the generalization of the ensemble by the optimization of the differences by the lost function concept using negative gradient. The model iterates over this array by applying negative gradient each cycle until it finally finds the minimum value or a strong local minimum.

The other model, Extreme Gradient Boosting, is a derivation of the normal Gradient Boosting, however, this is a more complex algorithm created to push the extreme of the computation limits of the machine used to provide a scalable, portable and accurate library. One of the most outstanding features of the XGB is that the it has a more regularized model formalization to control over-fitting, which gives it better performance.

These differences Between the two algorithms makes the XGB, one of the contenders in Kaggle competences being used by most of the kaggle competition winners, due to the method used by this model, which makes so much more probable to predict the real values of the model’s outputs.