



# EagleEye Insurance Score

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**EagleEye Insurance Score** has been proven to find signal over and above the signal provided by credit-based insurance scores, while facing none of the regulatory hurdles which are now being encountered in many states and provinces. EagleEye Insurance Score may be generated using only class plan variables or may be supplemented with third party data. Therefore, it is specific to an individual carrier's risk profile. Additionally, EagleEye Analytics automates the process of testing the final scoring model on a holdout validation data set, allows monitoring over time to ensure the predictive power of the model holds, and provides a service to revisit the scoring model if and when additional data become available.

**EagleEye Analytics' proprietary segmentation algorithms** use a combination of machine learning methods to create powerful models that generalize well to unseen data. EagleEye Insurance Scoring combines the power of EagleEye Analytics' exclusive segmentation algorithms with the robustness generated from machine learning ensemble methods. This combination of methods leads to the creation of models that are more stable and have less overfit than any other models available to P&C insurance carriers. Simply put, EagleEye Insurance Scoring pulls more relevant signal out of insurance data, ensures repeatable results, and avoids fitting noise. EagleEye Analytics' combination of methods is ideal for P&C insurance data, where claims events are infrequent and very noisy.

**Machine learning ensembles** are a class of algorithms that use a collection of learners to create a single model that is more reliable than a model based on a single learner. EagleEye Analytics uses a technique called **bootstrapping aggregation** as its main machine learning ensemble. Bootstrapping aggregation, also known as **bagging**, creates a large number of subsamples from training data and utilizes a base learner to generate its collection of models. A meta-algorithm is then used to combine the collection of models into one single model. Bootstrap aggregation allows all available data to be used, while muting the effect that outliers have on an analysis. Initially, bootstrapping aggregation was developed in an attempt to use weak learners, such as CART, to create a stronger learner. EagleEye Analytics combines bootstrapping aggregation with its much stronger base learners to produce an extremely strong yet very stable model.

In addition to its industry-leading algorithms, EagleEye's Scoring method implements additional meta-algorithms to better explore the space of possible models. **Boosting** is a supervised learning method that is used to adjust the weights of poorly-fitted observations in successive models. **Jackknifing** of variables, or the exclusion of random training variables, prevents the model from being sensitive to only a small subset of predictors. With its combination of technologies, EagleEye Analytics provides the best Insurance Score solution to the P&C industry.

EagleEye Insurance Score can be easily and quickly implemented with **EagleEye Real-Time Scoring Service**, a locally installed run-time module that quickly generates an EagleEye Insurance Score. Whether for quoting a potential client, for underwriting new business, or for pricing renewal business, EagleEye Real-Time Scoring Service provides a lower cost, more effective, and easier-to-use alternative to credit-based insurance scoring.