



HOW ML ADOPTION BENEFITS YOU

Machine learning can help any lender increase revenue and reduce risk through better underwriting, but it does present new concerns for the model validation team. ZestFinance Automated Machine Learning (ZAML) software was built to solve these concerns.



Comprehensively understand your model. With our explainability tools, there is no 'black box.' You will be able to understand how the model was built, including its limitations and risks. Further, you will be able to explain the contribution of every variable in your model, the interactions among them, and how the model is arriving at each decision.



Work within your existing validation process. Our tools and technology auto-document comprehensive model risk reports, enabling you to review and validate a model within your existing model governance process, as you would a traditional logistic regression model.



Improve model oversight. A single ML model can replace multiple segment-specific models. As such, you will only have to review one model, allowing you to gain greater oversight and efficiency of your underwriting. Our automated tools also detect subtle changes in model operating conditions and flag potentially discriminatory model features, which may warrant refitting or rebuilding your model.



Replicate your model with confidence. Our automated documentation tools capture every decision you make in building the model at every step along the way. That means you can replicate every part of the model development process.



Automated model risk management documentation. Our tools automate the creation of the comprehensive risk and regulatory documentation of all key model details and decisions that are expected by your regulators including the OCC, Federal Reserve, and FDIC.

WHAT YOU SHOULD KNOW

Among the most frequent questions we get from the model validation teams we work with:

How is my job going to change?

Not much. Because machine learning (ML) models are more complex than the logistic regression models you are more familiar with, there may be some differences in the validation methods that we suggest. However, the good news is that our technology and tools render ML models as transparent as legacy models and follow your existing model validation process. Plus, our tools automatically generate much of the required documentation for validation, making your process more efficient.

Why should I trust the ZAML model and the choices made while building it? What is the decision process behind each decision?

Our tools allow ML models to be rigorously tested and evaluated. Research shows that our explainability techniques are more accurate, consistent and efficient than alternative methods and are used by the world's largest financial institutions. We will gladly talk through any questions that you have.

Further, models built using ZAML ensure model fairness and transparency. Our tools collect information relating to all key model details and auto-documents these decisions to give you full visibility and oversight into the inner workings of the model. Our fairness tools also help you to identify the model that maximizes fairness without decreasing model performance by avoiding variables and interactions of variables that may introduce disparate impact.

How do you know your explainability method is correct and the contribution of each variable on the model?

We rely on sophisticated mathematical techniques that enable us to examine every variable in our model as well as the complex interactions among those variables. That greatly enhances model accuracy and consistency yet is less computationally intensive so it does not sacrifice speed. This is particularly important for real-time credit decisioning. We would be happy to answer any question you have about the math and point you to some helpful academic reports and some of Zest's own proprietary research.

How do you ensure that there is no degradation to model performance over time?

Our automated model risk monitoring tools can detect subtle changes in model operating conditions, such as shifts in the borrower applicant pool or in the economic environment, so that you can determine whether a model refit or rebuild is warranted. Because our tools allow you to put models into production quickly, you can maximize the performance of your models over time.

What is the level of retraining necessary?

We believe that our tools are intuitive and easy to use so an experienced model validation staff will be able to learn everything they need to know in just a few hours. We are happy to provide additional academic research papers and reports should you wish to dive deeper. And rest assured, our underwriting experts are there to support your model validation team at every step along the way.