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 modeling team. ZestFinance Automated Machine Learning (ZAML) software was built to solve these concerns.

Build more powerful models. Our tools can help you maximize your data and build more accurate, consistent, and efficient models that have helped our typical client achieve a 15% increase in approvals (without taking on more risk) or reduce their losses by 30% or more, while holding approvals constant.

Work in what you know. Our tools are built to be platform agnostic so they will augment, not disrupt, how you work—whether it is in SAS, R, Python, or other types of code.

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 between them, and how the model arrives at each decision.

Automated model risk management documentation. Our tools automate the creation of the comprehensive risk and regulatory documentation of key model details and decisions, including documentation needed to satisfy regulators at the OCC, Federal Reserve, FDIC, and other agencies. Our tools help facilitate and work within your existing model governance process.

Ensure model fairness and transparency: Our fairness tools help you identify the model that maximizes fairness without decreasing model performance, while avoiding variables and interactions of variables that may introduce disparate impact. Further, we provide applicant-based explainability so that you can be confident your model is operating fairly for individual customers and across all applicants.

WHAT YOU SHOULD KNOW

Among the most frequent questions we get from credit teams:

How will my job change?

Zest tools empower you to do your job faster and more productively. You can design and implement a more performant model that is right for your business. But, ZAML explainability tools can help automate the critically important but tedious stuff such as model documentation, model validation, and model monitoring. That will allow you to put your model into production in as little as three months, accelerate iterative improvements, and free you up to focus on the more rewarding, creative, and fun aspects of model development.

Where does the model's value typically come from?

There are a lot of ML solutions out in the market today; frankly, it's a bit of the Wild West. The value of Zest's approach is that our tools allow you to make better use of the data that you already have. ZAML allows you to explore all of the data that feeds into generating each applicant's aggregate credit score, as well as the complex interactions among those variables. You also may consider other sources such as application data, CRM data, or other third-parties like LexisNexis, Clarity, or E-Bureau. ZAML lets you maximize the ROI of your data budget by analyzing thousands of variables to figure out which ones contribute most to accuracy and predictive power (and get rid of the ones that don't). Traditional underwriting models, which rely on logistic regression, rely on only about 30 or so variables. ZAML models draw upon thousands of variables.

Do ZAML models satisfy fair lending and other regulatory compliance requirements?

Yes. ZAML tools will ensure that your model can meet all existing regulatory requirements, including ECOA, FCRA, and UDAAP.

ZAML uses new and more powerful math that can show users the contribution of every variable, as well as the impact of the complex interactions between them. This allows users to gain the benefits of ML to achieve better results and explain every step of the credit decision process. What's more, other ZAML tools help automate the documentation of all details and decisions during the model building process, making it easier and more efficient to comply with current model risk management (MRM) guidelines. As a result, our clients typically get their model out of the lab and into production in just three months with the confidence they are adhering to the law.

Although the increased complexity of ML models makes it harder to tease out fair lending risks, ZAML tools enable you to see the discriminatory effect that every feature or variable has in the model. ZAML tools allow you to remove variables or features that present fair lending risks and understand its effect on performance. Often, these variables can be removed with little-to-no impact on performance so you can maximize fairness without sacrificing performance.

Will my ZAML model work on new data or if economic conditions change?

Yes. One of the biggest benefits of using ZAML tools is the availability of real-time, automated model monitoring. We recognize that the real world is in a constant state of change and so are the inputs upon which your ML model relies.

ZAML's tools were specifically designed to flag even the most subtle changes that occur in model operating conditions so you can decide whether it warrants changes to your model. And thanks to our model building, verification, and documentation tools, you will be able to get that new ML model up and running safely in a matter of months.

Will you show us the math Zest's tools use?

Yes. Zest's own modelers are happy to walk you through each and every step. Prior to contract, we are happy to provide you with a detailed conceptual understanding on how our ZAML tools drive fully explainable models. Once you formally engage us, we would be glad to walk you through the mathematical details of the ZAML explainability tools.

Will ZAML tools work in my prefered platform?

Yes. ZAML's software is built in R and Python and works across a wide array of platforms. That means you can code in whatever language works best for you. That should minimize the learning curve and get you up-and-running faster.

Visit our website at **www.zestfinance.com** or contact us at **partner@zestfinance.com** to learn more.