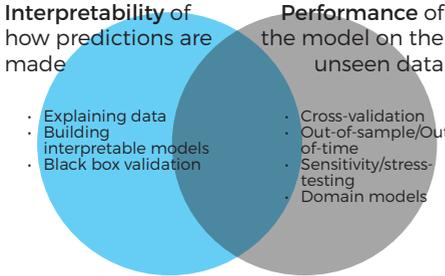


Machine Learning Model Validation



There seem to be two persistent challenges that organizations face in adopting machine learning driven solutions.

The first is about **performance**: how firms can sustain model accuracy in the context of new, unseen data.

Secondly, the increased accuracy often comes at the cost of **increased complexity of the models**. Complexity reduces transparency and makes them less intuitive from a human perspective.

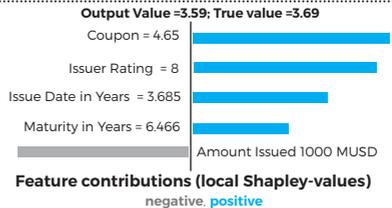
The accuracy-interpretability trade-off prevents many businesses from fully leveraging the latest developments in the machine learning arena.

We are proposing a **comprehensive software supported framework** to address these key challenges. The solution is built on three main ideas:

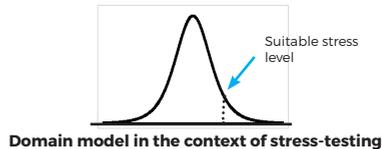
1. An **end-to-end assessment of each stage of the modelling process**. By systematically reviewing each stage of the data science cycle, the root causes of model issues can be addressed rather than the symptoms.



2. For **interpretability** we make use of sophisticated approaches to identify, measure and evaluate each input feature's contribution to the model output. The approach is built from the local level up to global level sensitivity analysis. The model agnostic nature enables assessment of different models in a uniform way.



3. Domain specific models are offered to boost **the predictive accuracy** and at the same time enable **more realistic, scenario-based stress testing**. These domain specific models can either be applied to work in isolation as challenger models, or be used in tandem with existing models.



In addition, we are mindful of other critical aspects to model validation. These aspects include a framework for how to validate the accuracy and robustness of the validation itself, i.e. **"validation of the validation"**.

Finally, we are committed to develop and adapt the solution together with you in order to achieve **a bespoke solution**, including how to best access data with maintained integrity, integrating with existing workflows and the enablement of a scale-able solution where the range and depth of the validation can be adjusted according to the needs.

Contact

Kidbrooke Advisory AB provides a modular software platform enabling banks and insurers to build their own digitalized offerings which are compliant by design, cost-efficient and research-based. While their platform provides automated decision making capabilities, it also includes powerful tools for many types of model validation, including machine learning explainability.



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