Trustworthy Al in Life Insurance and Wealth Management

Improve quality, build trust, scale up.

Scaling AI/ML in life insurance and wealth management

Artificial Intelligence and Machine Learning (AI/ML) has the potential to transform life insurers and wealth managers, touching every core process: marketing, underwriting, pricing, claims, fraud management, wealth management, and customer engagement.

However, real-world adoption of AI/ML remains sub-scale in most insurers. For many, AI/ML models are not considered transparent and reliable enough to meet business, customer and regulatory expectations in high-stakes use cases.

Life insurers and wealth managers face a difficult choice - ride the AI/ML tiger and risk reputational and regulatory blowback from poorly managed risks, or continue with lukewarm adoption and cede ground to 'braver' tech-first challengers. They must take the challenge head-on, and put in tools and processes to make AI/ML trustworthy.

TruEra helps insurers capture business value from AI/ ML at scale



Faster deployment

Improve model quality earlier in the life cycle. Accelerate time to approval.



Greater buy-in Explain easily models to stakeholders.

Build understanding and trust.

Robust governance

Automate compliance with regulatory and internal standards on AI/ML use.



Insurers and relevant third parties "should apply a systematic risk management approach to each phase of the AI system life cycle on a continuous basis to address risks related to AI systems, including privacy, digital security and unfair discrimination as defined by applicable laws and regulations."

US National Association of Insurance Commissioners (NAIC) Principles on AI, Aug 2020

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Barriers to AI/ML adoption

Transparency

Is the regulator able to understand how customers' data is used for underwriting and pricing decisions or investment advice?



Are claims made by customers of a particular race, gender or age group more likely to be discriminated against?



Data bias

Will the pricing model trained using data from one geography or segment work in another?



Stability

How did the insurance underwriting model react to a major environmental change? Is the model still valid?

"Given the large amounts of data used by insurance companies across all parts of the insurance value chain, it is essential that insurance companies address the wider implications of the use of AI to ensure fairness and good consumer outcomes."

European Insurance and Occupational Pensions Authority, June 2021

Potential use cases - building trust in the AI/ML applications of life insurers and wealth managers

Targeted Marketing

- Assess whether marketing approach is promoting products unsuitable to customers' circumstances and/ or needs
- Determine whether certain segments, however defined, are being actively, possibly inappropriately, targeted or avoided

Underwriting

- Understand what drives underwriting models' decisions as to which market segments to cover, along with which exclusions or limits to apply
- Ensure that insurance underwriting model decisions can be explained easily to regulators

Claims management

- Monitor the predictive power and stability of the claims triage model on an ongoing basis
- Help investigators understand why particular claims have been flagged as fraudulent

Investment process

- Understand drivers of investment advice models, thereby identifying potential biases
- Monitor the reliability of investment advice over time

Why TruEra?

*	Deep financial services expertise	r	Proactive engagement with financial and data regulators	
0	Model quality through the lifecycle: development, review and approval, monitoring	Q	Reliable explainability: well-suited to a regulated industry	
	Broad support for different Al/ML model types, data types and platforms	Ξ	Easily embedded into different tech stacks	Co

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Technical pricing

- Confirm rating models are not using either directly or as a proxy - data points that are not regulatory compliant
- Obtain regulatory approval for rating models by clearly explaining how premiums are being calculated by the model

Operational automation

- Provide early warnings when data drift is likely to impact the accuracy of models used to automate back-office processes
- Diagnose quickly root causes for performance degradation in operational efficiency models



ol Vendor in Al Governance and Responsible AI

Gartner



10 Most Innovative Al Companies of 2021

Fast Company

www.truera.com

Life Insurance and Wealth Management Datasheet

TruEra Al Quality Management Overview

TruEra fills a critical gap in your AI stack, explaining and testing model quality throughout the lifecycle. TruEra's AI Quality Management solutions explain, debug, and monitor machine learning models, leading to higher quality and trustworthiness, as well as faster deployment. Backed by years of pioneering research, TruEra provides value across the model lifecycle, is independent of model development platforms, and embeds easily into your existing AI ecosystem.

TruEra Diagnostics

Experience fast, accurate, and scalable AI Model Quality and Explainability that build trust, helping models get into production and stay there.

Best-in class explainability

that is accurate and performant, based on years of research

- **Deep model evaluation** for assessing AI model quality, including bias, stability, reliability, and conceptual soundness
- Universal approach that scales across model development platforms, use cases, and ML model types

TruEra Monitoring

Easily track and troubleshoot machine learning model performance. With unique analytics, TruEra Monitoring goes beyond basic observability solutions by enabling faster root cause analysis and action.

- The broadest, deepest view
 into model performance
- Fast, precise debugging that saves data scientist time and effort

Easy deployment and scaling across hundreds of models in production

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DATASHEET

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Feature	Importance
Age	18.2 %
Smoker status	15.5 %
Gender	13.1 %
Body Mass Index	10.5 %
High risk lifestyle flag	8.3 %
Adverse family medical history	6.1 %

Explainability - Input factors driving the model's predictions/ recommendations

Rest of the population isparate impact Avg score Count avored -1.619 999	
Ground truth disparity	Model score disparity
Difference in outcomes (%) 4.45%	Wasserstein Distance Mean Difference 0.367 -0.367
Positive ground truth rate (%)	Score distributions
18.62%	0.5 0.25 0 -4 -3 -2 Scores

Fairness - Differences in model's treatment of different groups (e.g., gender, race)

Base split 000 2017Q1	Compare split 2019Q4	v
Model score stability [-9.9, 9.9]	Model predictive accuracy [0,1]	Model score
-0.373	0.778	

Stability - Differences in model's predictions and accuracy over time