Trustworthy AI in Banking

Improve quality, build trust, scale up.

Scaling AI in banking is hard

Artificial Intelligence and Machine Learning (AI/ML) are transforming banking, and now represent a key battleground between incumbent banks and digital-first challengers. A majority of banks have some live AI/ML use cases, particularly in risk and compliance, customer interactions, and credit decisioning.

However, very few banks have managed to scale up such that AI/ML starts starts having a significant impact on earnings or core business models. AI/ML remains largely peripheral and ringfenced in its impact.

One key reason for this disconnect is that AI/ML is being introduced in banks to replace existing manual, rule-based, or statistical model alternatives. Convincing business leaders, control functions, regulators, and customers that AI/ML is a trustworthy alternative remains a significant barrier, particularly in high stakes use cases. Demonstrating trustworthiness in a repeatable, automated way, a way that allows data scientists to focus on building quality models, is even more difficult.

TruEra solves the AI trustworthiness and scaling problem, helping banks capture real business value.
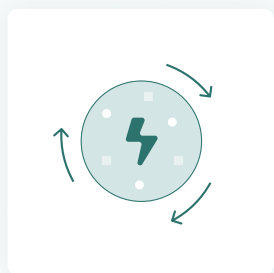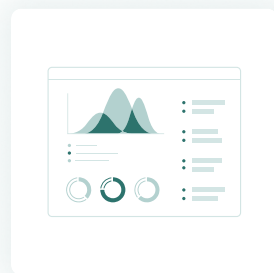
Faster deployment

Better quality models, earlier in the model lifecycle. Shorter validation timelines.
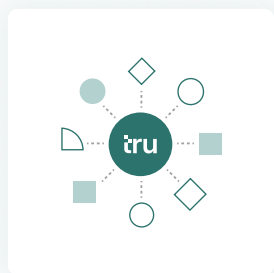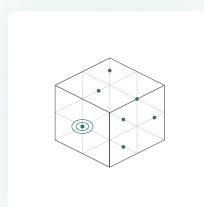
Greater buy-in

Easier for impacted stakeholders (staff, business leaders, customers) to understand and trust the models.
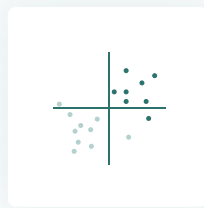
Robust governance

Automated compliance with evolving regulatory expectations and internal model and data standards.

Barriers to AI/ ML adoption

Explainability

How does the system decide which sanction alerts to close? Why was this transaction not flagged as fraudulent? Which factors are driving investment recommendations?

Data Bias

Was the data set used to train the customer authentication system representative of the population? Will the customer risk model trained for one segment work with another?
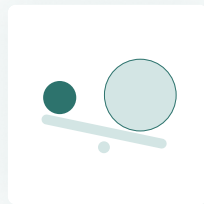
Fairness

Are women less likely to get a loan? What is driving the disparity with men? How can it be rectified?

Stability

How did the credit model react to Covid 19? Which factors drove the change? Is the model still fit for use? How is it likely to react to future changes?

TruEra AI 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.
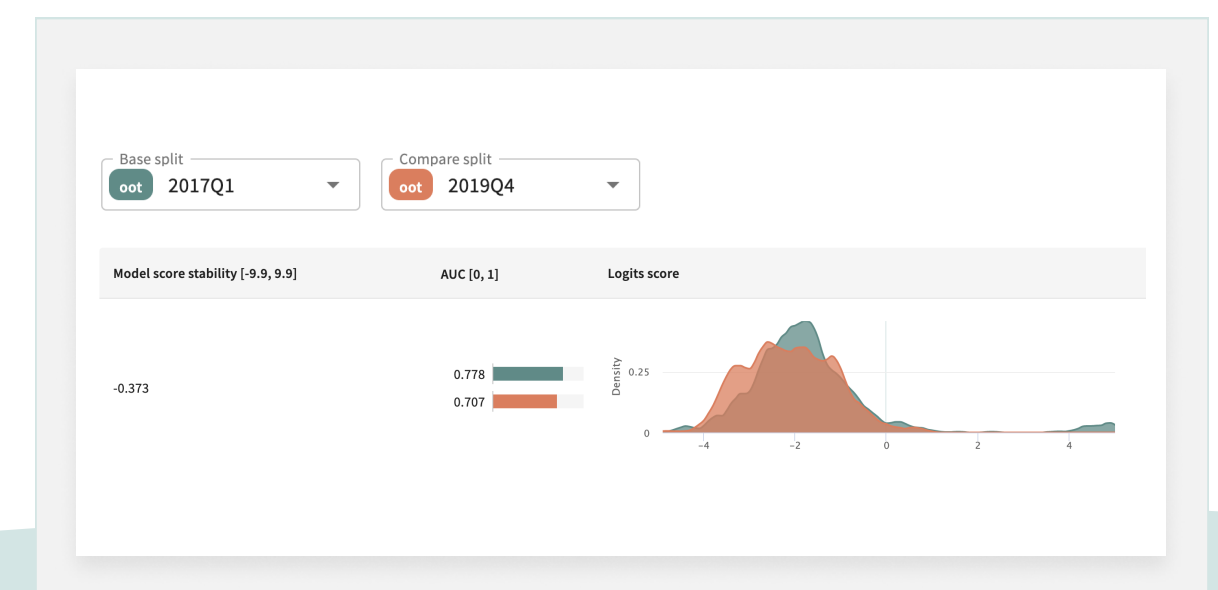
- **The broadest, deepest view**
  into model performance

- **Fast, precise debugging**
  that saves data scientist time and effort

- **Easy deployment and scaling**
  across hundreds of models in production
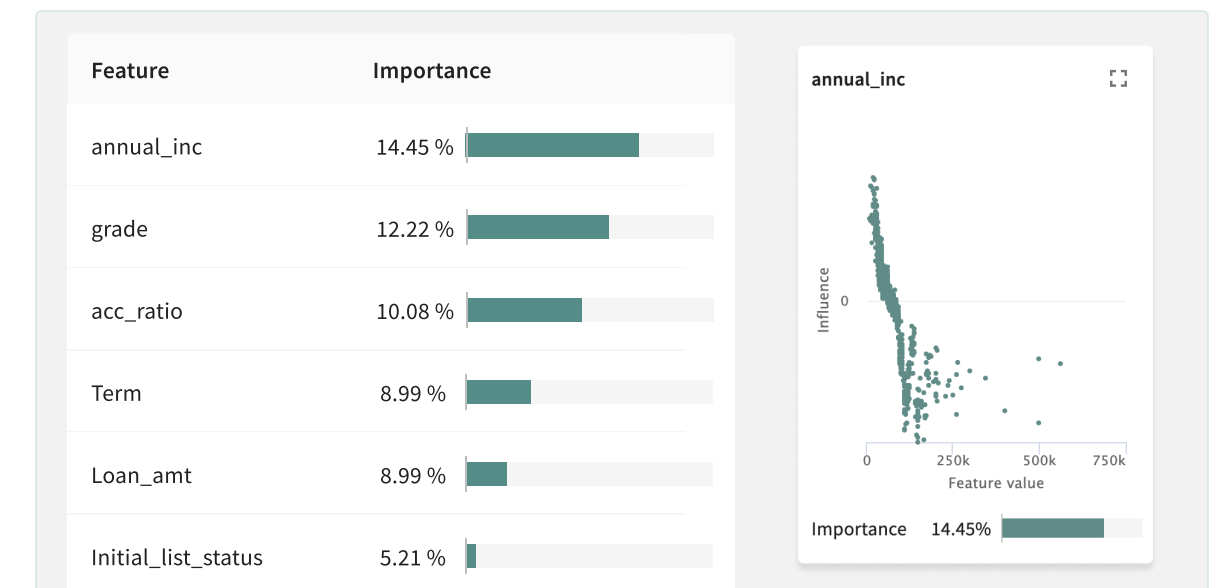
Feature importance
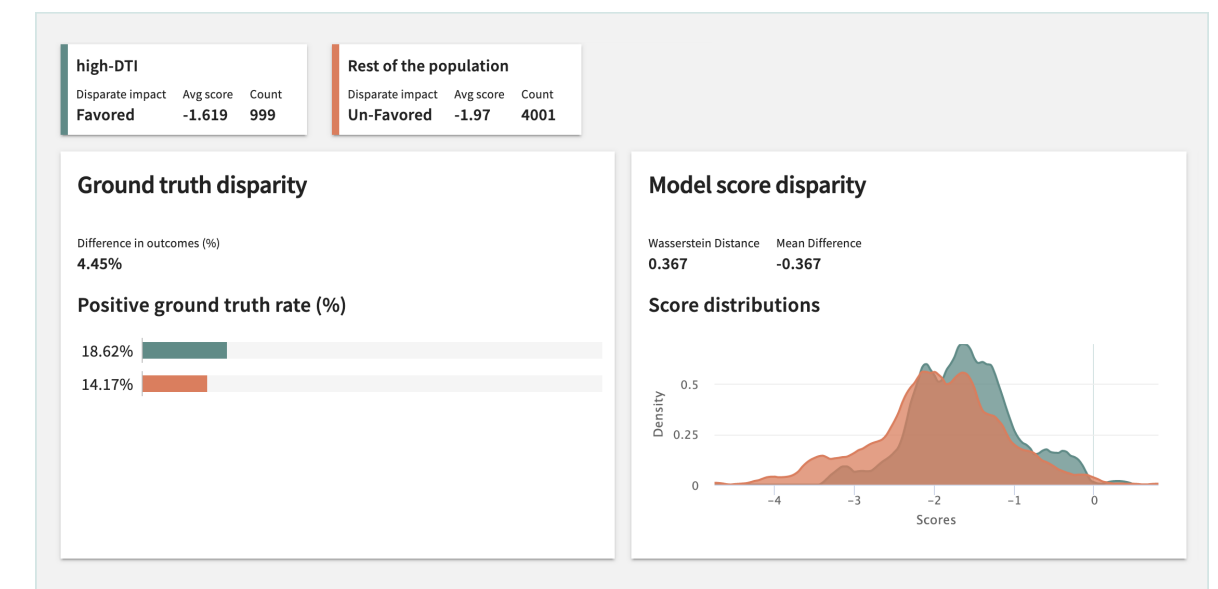
Fairness / unjust bias assessment

Stability assessment

TruEra use cases in banking

Credit Approvals

- Help a customer understand why their loan application was rejected

- Provide information on how a customer could improve their future chances of getting approved

- Assess if the credit model is unfairly discriminating against particular groups of customers

- Monitor changes in input data patterns over time to estimate the likely impact on the model's predictive accuracy

Financial Crime Compliance

- Explain how the new ML-based Client Risk Assessment model differs from the existing one

- Provide business-friendly explanations on the way in which the ML-based detection system is flagging transactions for potential money laundering

- Help investigators understand why the alert optimisation system closed a particular alert automatically

- Convince regulators that the system to automate investigations is reliable

Fraud

- Explain how customers can reduce the risk of their transactions getting blocked erroneously

- Monitor the performance and stability of a fraud-detection algorithm over time

- Set thresholds to determine when human oversight is needed to approve model recalibration

Targeted Marketing

- Assess if the marketing engine is mis-selling products, e.g., lending to a vulnerable customer

- Explain to a Relationship Manager why they are being advised to promote a particular product

- Monitor the effectiveness and stability of the model on an ongoing basis

Financial Markets

- Demonstrate that a trading algorithm does not pose a systemic market risk

- Get buy-in for a new (ML) pricing model by providing meaningful comparison with the existing (non-ML) model

- Monitor predictive accuracy of an execution algorithm over time

Operations Automation

- Provide early warning when data drift is likely to impact the accuracy of models used to automate operational processes

- Assess the reliability of the model to determine the appropriate level of human supervision

Why use TruEra for banking?

★ **Deep banking expertise**

▦ **Broad support for different ML model/ data types and platforms**

Q **Reliable explainability: fit for purpose in a regulated industry**

◐ **Model quality through the lifecycle: development, validation, monitoring**

☑ **Proactive engagement with financial and data regulators**

≡ **Easily embedded into banking tech stacks**

standard chartered

We see Truera as an essential partner in how we build and operationalize higher quality, trusted AI models faster and more efficiently.

- Vishu Ramachandran, Global Head, Retail Banking, Standard Chartered

More about TruEra and Banking:

- **Case Study:** Standard Chartered

- **Whitepaper:** Re-Imagining Model Risk Management to Capture the AI Opportunity in Banking

- **Bank of England Working Paper:** Machine learning explainability in finance: an application to default risk analysis

- **Industry consortium:** How TruEra is helping establish a methodology for AI transparency in Singapore (Veritas Consortium)