



MONITAUR

Finance Case Study

In the financial sector, models have been used for years to more accurately and consistently make decisions on credit, lending, and internal operations. With the increase of regulatory scrutiny following the 2008 financial crash and the subsequent Dodd-Frank regulations, the Office of the Comptroller of Currency (OCC) and the Federal Reserve released a joint guideline called OCC 2011/12 and SR-11-7¹ with instructions on how to create a comprehensive model management program. However, with the rise of more complicated models, the existing periodic auditing and verification standards in OCC 2011/12 are not enough to help auditors and regulators be comfortable with machine learning models.

As the financial auditing profession has been pivoting from quality and annual sampling to continuous auditing, so should model management pivot to a continuous auditing paradigm. Monitaur is designed specifically to meet this need as a platform that provides **Recording, Understanding, Verification, and Auditing** capabilities for your machine learning models (and traditional statistical models as well). Monitaur has a lightweight API that integrates right into your production machine learning Python code to record details of all model decisions. Monitaur versions the model and production code file to provide down to the transaction level ability to detect when model or code changes have occurred and auto-increments the model version. If a lightweight API call is made during the model training, Understandability can be provided to show IF statements illuminating the “black box” to show business stakeholders how a decision was made. With our easy to use web application, it is easy to search and find specific transactions and see the inputs, decision, the model version, and Understanding for why a decision was made, providing the type of verification and auditability of models has had been previously unattainable. In a soon-to-be-released version of the Monitaur platform, model reperformance will be available allowing the auditor to reperform decisions in order to validate their consistency. Additionally, sensitivity and “what if” analysis can be performed to ascertain how the model would have made a decision if the inputs were slightly different.

With the continuous assurance provided by a trusted third party, Monitaur strengthens all three lines of defense allowing financial institutions to begin deploying more complicated non-linear models to production while providing the assurance auditors and regulators need.

¹ "SR 11-7: Guidance on Model Risk Management." The Fed - Supervisory Letter SR 11-7 on guidance on Model Risk Management -- April 4, 2011. The Federal Reserve, April 4, 2011. <https://www.federalreserve.gov/supervisionreg/srletters/sr1107.htm>.

To learn more about how Monitaur can help you unlock AI innovation, decrease risk, and increase assurance around your models, visit monitaur.ai and reach out to schedule a demo.