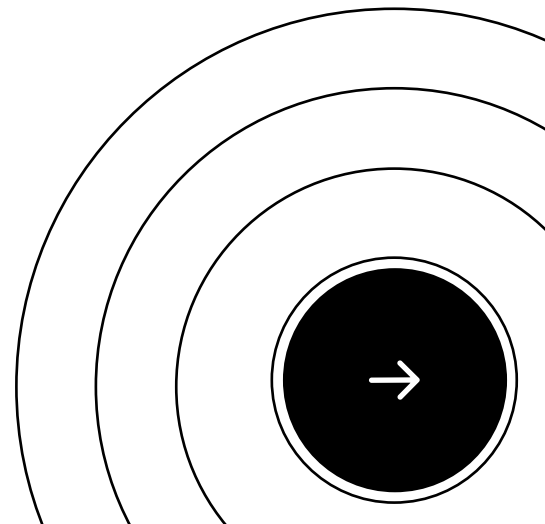# Enhancing food delivery with ML-driven optimization

Superwise

Optimizing efficiency, delivery, & customer satisfaction

Data science and engineering teams manage multiple models to make their predictions, including time-series analysis and forecasting, customer analytics and personalization, & product recommendation engines. When it comes to estimating food delivery times or courier route predictions, however, not all models are created equal.
Delivering a dish within 45 minutes when you've estimated it would take 30 may mean having to reimburse an unhappy customer.

Business-critical models are often region- or population-specific. They require a high level of granularity to show how the behavior of subpopulations impact your ML model's predictions. Using traditional metrics such as accuracy or averages may no longer be enough to ensure that models deliver on their promises. Customers in Paris may have very different expectations than customers in Riga.

How Superwise can help

Data scientists

need to be able to need to be able to understand how and why data and models behave in each subgroup. It's important to understand the ways distance, delivery types, carrier groups and weather may impact the quality of your predictions. Being able to monitor subgroups separately lets you keep a close eye on your models in production. Theoretically, you can do this on your own, but the labor- and time-intensive tasks related to monitoring & maintaining multiple models often comes at the expense of actual model optimization.

Superwise is a self-service platform that provides enterprise-grade model monitoring capabilities in an easy, customizable, scalable, and secure way. It automates model metrics calibration, analyzes events, and correlates anomalies, which accelerates the time to resolution before issues impact business outcomes. With the ability to compare subsequent versions of models, data scientists can also see which retraining strategies have led to better models.

Business analysts

To ensure both customer and employee satisfaction, data science and business teams alike need to feel confident in ML model predictions. Any reduction in performance or accuracy of the models needs to be discovered immediately, before it negatively impacts your business.

To keep a close eye on the performance of subpopulations, Superwise provides a full analytical suite that examines in-production data and discovers trends, enabling practitioners to track and predict model performance over time, detect underperforming segments, and pinpoint changes at a granular level.

How Superwise can help

Marketing analysts

develop marketing strategies for customer acquisition, analyze data to detect trends or patterns among subpopulations, and create customer segmentation based on demographics, behavior or preferences to tailor promotions or brand differentiation. ML models can help provide user-based insight to support decision-making for these activities.

Superwise uses machine learning and key performance indicators (KPIs) to automatically detect anomalies, identify information about different behaviors among specific subpopulations, and test what kind of recommendations will better target new users or geographies.

Fraud analysts

use multiple ML models to detect fraudulent and suspicious activity such as unusually large orders, multiple orders to the same address, or orders from high-risk locations. They are also responsible for supervising the models and validating their ability to identify patterns or new trends that may indicate fraudulent activity.

With Superwise, fraud analysts have direct visibility into the model and can conduct risk assessments to validate their hypotheses or identify vulnerabilities and suspicious anomalies. This allows them to react quickly to prevent fraud or create defense strategies to reduce the risk of fraud.

Monitor, analyze and optimize all our models

Superwise allows your data science and operational teams to monitor, analyze, and optimize your models in production by creating an easy-to-understand, single source of truth. This ease of access fosters more trust with stakeholders in your ML model predictions and allows you to scale your ML models more effectively.

Know exactly when your models fail and why
Get real-time alerts on data and model drifts, performance issues, correlated events, and weak spots. Superwise provides automated root-cause analysis to dramatically reduce the time needed to detect and fix issues.

Observe your models in production
A full analytical suite examines your in-production data and discovers trends. Thanks to out-of-the-box and customized model KPIs, you know what is happening with your model right when it's happening. You can also track and predict your model's performance over time and through updated versions, detect underperforming segments, and pinpoint changes at a granular level.

Optimize models with production-driven insight
With the ability to compare subsequent versions of models in production, you can see which retraining strategies led to better models and which didn't.

Enhancing food delivery with ML-driven optimization
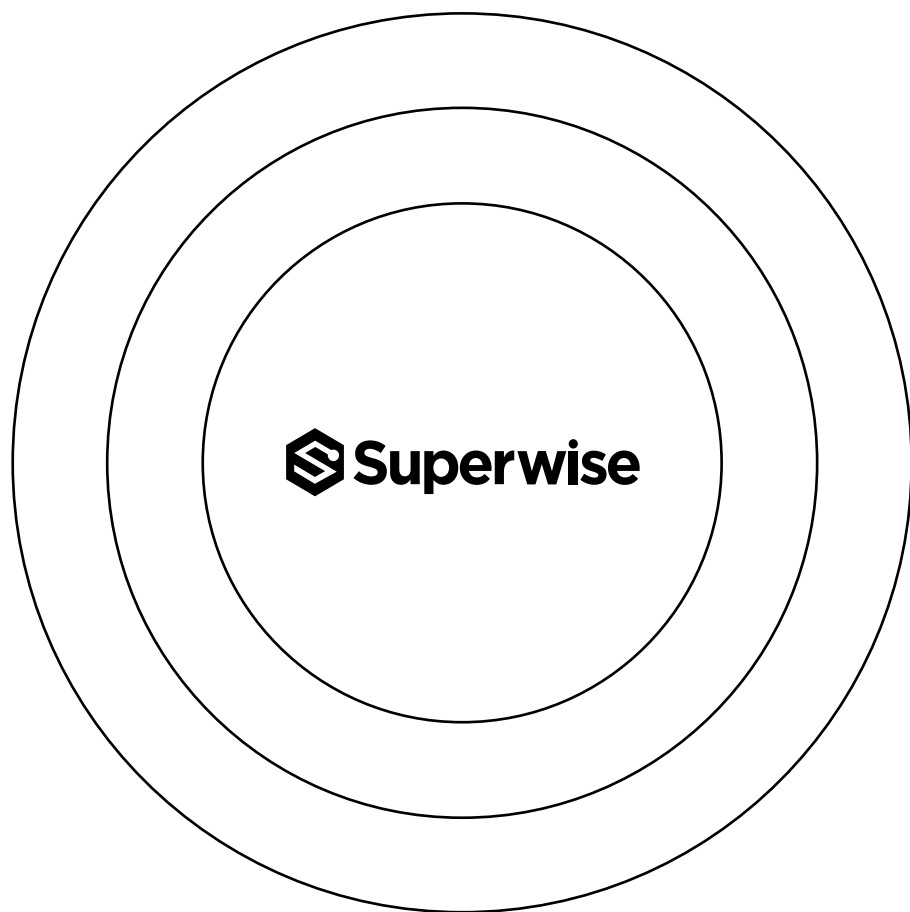
Superwise is a model observability platform built for high-scale production ML. Giving practitioners fully automated, enterprise-grade model monitoring capabilities that take years to develop in-house, wrapped in a self-service platform. Superwise auto-calibrates model metrics, analyzes events, and correlates anomalies for you so you can easily see when models misbehave and accelerate your time to resolution before issues impact business outcomes.

Head over to the Superwise platform to learn more and get started with easy, customizable, scalable, and secure model observability for free.

www.superwise.ai