



nVIDIA

AI-DRIVEN FORECASTING

RE-INVENTING RETAIL WITH AI

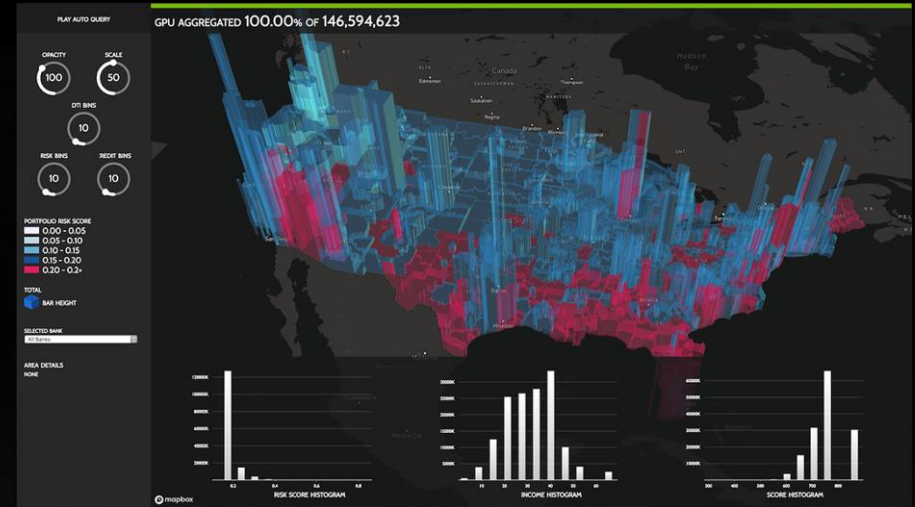


AI FOR DEMAND FORECASTING

As consumer buying behaviors change, retailers want to respond in real-time to ensure the right products are in each store at the right time.

To do so forecasting solutions need to use AI algorithms that can deliver higher accuracy, by training algorithms faster and more frequently. This requires the compute power to run hundreds of millions of products/store combinations on a weekly or daily basis.

For example, Walmart has improved their forecast accuracy by 4% using algorithms that are trained 20 times faster with GPUs.



IMPROVING DEMAND FORECASTS

With >100,000 different products in its 4,700 U.S. stores, the Walmart Labs data science team predicts demand for 500 million item-by-store combinations every week.

By performing forecasting with open-source RAPIDS data processing and machine learning libraries built on CUDA-X AI on NVIDIA GPUs, Walmart speeds up feature engineering 100x and trains machine learning algorithms 20x faster, resulting in 4% improved forecast accuracy, faster delivery of products, real-time reaction to shopper trends, and inventory cost savings at scale.





ENTERPRISE SCALE FORECASTING WITH GPU-POWERED DEEP LEARNING

A leading restaurant chain with 2,000+ restaurants was experiencing issues with its modeling approach to forecast demand.

The legacy forecasting engine was inaccurate, lagged sales trends, could not account for external influences or seasonalities, and did not adapt to tailored models.

Quantiphi delivered a new forecasting engine that leverages deep learning on NVIDIA GPUs.

Quantiphi's forecasting engine improved accuracy by over 20% and allows for feature engineering, scenario forecasting, and Day 1 forecasts for newly introduced items and newly opened stores.

Further, Quantiphi's business intelligence tool enables visualization, analysis, alerts, and establishing control variables.

TO LEARN MORE

Contact us: retail@nvidia.com

Watch video: [Walmart on Retail Forecasting](#)