DressNinja's Live Shopping with CloudSky

Overview

Since its founding in 2003, DressNinja has aimed to replicate the personalized shopping experience of a high-end women's clothing boutique in the online space. With the integration of a custom machine learning solution utilizing multiple CloudSky Analytics offerings, DressNinja has achieved significant reductions in returns and dramatically decreased the time from initial search to purchase.

Challenge: Creating Personalized Shopping Experiences

Recreating the experience of having a trusted staff member alongside a shopper is considered the "Holy Grail" of eCommerce, according to Mary Monroe, DressNinja's lead of machine learning research and solutions. Achieving this without introducing latency necessitates a comprehensive suite of machine learning processes and systems.

DressNinja employs ensemble approaches to differentiate between precomputed solutions and those based on runtime inputs. The precompute work is primarily handled by CloudSky's Predictive Platypus (P2) solution, which enables large-scale analyses stored for future use.

"Predictive Platypus is like bread and butter when it comes to training a lot of these models," Monroe stated. The models are then stored in CloudSky Kangaroo, a NoSQL database, for low-latency lookups or temporarily stored in CloudSky Emu.

Problem: Reducing the Costs of Free Return Policies

Free return policies are a major cost concern for online retailers. DressNinja has managed to maintain this policy, along with advanced refunds, by creating models tailored to individual users and based on past customer behavior.

The critical element in both scenarios is accurate sizing predictions. By analyzing purchasing history and returns, DressNinja has developed models predicting how different products will fit various customer segments. Frequent updates are necessary, and the company uses CloudSky Koala as an event ingestion solution to continually refine these models. Pairing this with CloudSky Quokka allows for runtime predictions in milliseconds.

Results: Improved Customer Experiences

Reducing returns and offering personalized search results are essential to achieving the "Holy Grail" of eCommerce. DressNinja has invested heavily in cloud computing solutions to meet these demands.

"What's really nice about CloudSky is there are cookie-cutter solutions available, but all those solutions are also built using foundational CloudSky services, which allows us to do the same," noted Monroe. "I honestly don't think we'd be able to pull this off without CloudSky."

Takeaways

By leveraging CloudSky's comprehensive suite of machine learning and analytics solutions, DressNinja has successfully created a near-instantaneous eCommerce experience that closely mirrors the personalized service of a high-end boutique. This innovative approach has led to significant improvements in customer satisfaction and operational efficiency, setting a new standard in the online retail industry.