Case Study

UL Solutions issues first artificial intelligence verification mark to LG Electronics

LG Electronics

UL Solutions

Safety. Science. Transformation.™

Why verifying AI algorithm reproducibility is important

Appliances enhanced by AI offer consumers significant sustainability, safety and ease-of-use benefits. As a result, digitization is a growing focus in the appliances industry; Statista's 2021 Smart Home Report predicts a revenue increase from $29.1 billion (USD) in 2020 to $71.1 billion (USD) by 2025.

While some standards help guide the commercialization of AI-enabled products, there remains a significant gap in the availability of practical solutions to substantiate marketing claims regarding their reliability. When the dependability of an AI algorithm plays a central role in a manufacturer's claim, verifying reproducibility proves essential for earning consumer trust.

In the absence of a verification system for products that rely on AI algorithms for performance, LG Electronics sought a way to establish the dependability of its AI-enhanced laundry products. The appliance giant turned to UL Solutions to devise a marketing claim verification program for AI algorithm reproducibility so they could substantiate their claims and boost customer confidence.

*"LG's commitment to product performance runs deep.
That's why we worked with UL Solutions to obtain objective and independent verification from a third party for AI technology in our laundry products."*

-Baek Seung-tae, executive vice president of the Living Appliance Business Division at LG Electronics

How UL Solutions verified LG Electronics' AI algorithm reproducibility claim

Intelligent care with 18% more fabric protection

Based on big data of accumulated washing experience, AI DD™ offers the most optimized washing motion to care for your laundry.

"We are proud that LG Electronics is the first in the home appliance industry to earn Marketing Claim Verification for AI algorithm reproducibility. You can trust the reproducibility of the AI algorithm of the LG laundry products because we have had this algorithm third-party verified by UL Solutions."

- Baek Seung-tae

The UL Marketing Claim Verification program for AI algorithm reproducibility is a first-of-its-kind offering that helps establish the accuracy of claims about an algorithm's performance in AI-enabled products. Verification is now available to any company that has created an algorithm essential to the proper performance of a manufactured hardware product or system.

Grounded in predictive modeling best practices, verification involves an in-depth review of the building and deployment processes. The manufacturer provided UL Solutions with an unprecedented view into its proprietary AI algorithm, enabling us to independently evaluate its performance and substantiate AI-related marketing claims.

The process includes:
- A detailed scoping of the application
- A description of the dataset
- The appropriateness of performance metrics
- The controls implemented in deployment
- The tracking of algorithm performance in production

After assessing LG's laundry products (specifically, FX23****, FX24****, FX25**** and W20****), UL Solutions verified the reproducibility of the appliances' AI algorithm performance and issued the first Artificial Intelligence Verification Mark to LG Electronics. In addition to improving LG's credibility and strengthening customer confidence, the Mark helps the appliance brand differentiate its products in an overcrowded market.

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