Forward Edge-AI wins patent for blockchain-secure, quantum-proof ML updates—a leap for trusted AI governance.

Forward Edge-AI secures U.S. patent for quantum-resistant, blockchain-enabled ML updates—advancing secure, trusted AI governance.

SAN ANTONIO, TX, UNITED STATES, May 21, 2025 /EINPresswire.com/ -- Forward Edge-AI, Inc. today announced that the United States Patent and Trademark Office has allowed a groundbreaking new patent titled "Methods, Systems, Apparatuses, and Devices for Facilitating Secure Updating of a Machine Learning Model." The patent cements Forward Edge-AI's leadership in addressing one of the most critical gaps in Artificial Intelligence (AI) strategy: securing and validating the provenance and integrity of AI models in the post-quantum era.

> " This patent represents a fundamental advancement in ensuring AI trustworthiness and transparency across defense, intelligence, and financial, and medical systems operating under zero-trust conditions."
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> *Eric Adolphe, CEO Forward Edge-AI, Inc.*

At the heart of this new innovation is a system that leverages Quantum-Resistant Encryption and Blockchain record keeping to enable secure, traceable updates to AI and machine learning models. The technology ensures that every model update—whether initiated at the edge or within a high-side enclave—can be authenticated, encrypted, and immutably logged to prevent tampering, rollback attacks, or adversarial manipulation.

The patented technology directly addresses objectives outlined in the US Intelligence Community's AIM Strategy (Augmenting Intelligence with Machines), particularly the urgent need for trusted AI provenance and automated model updates across federated environments. The new technology also operationalizes core elements of the NIST AI Risk Management Framework (AI RMF), including risk-based governance (GOVERN 1.4, 1.6), transparency (MAP 1.5), and continuous monitoring against malicious drift or unauthorized retraining. Furthermore, it aligns with strategic safeguards proposed in the Superintelligence Strategy, especially regarding Mutual Assured AI Malfunction (MAIM) deterrence and secure lifecycle controls for AI agents.

About Forward Edge-AI

Forward Edge AI, Inc. is rapidly becoming a dominant player in AI and is leading the revolution in augmenting edge technology with human intelligence. Forward Edge-AI's mission is to develop compelling, mass market solutions at the forward, competitive, and humanitarian edge to enhance the safety and security of the free world. Forward Edge-AI is headquartered in San Antonio, Texas.

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