Neurotechnology Improves Latent Fingerprint Technology, Placing the Company Among Top Performers in NIST ELFT Evaluation

Neurotechnology's latent fingerprint algorithm reached up to a threefold accuracy increase, placing the company among top performers in the NIST ELFT evaluation

Neurotechnology is a developer of high-precision algorithms and software based on deep neural networks and other AI-related technologies.

VILNIUS, LITHUANIA, August 28, 2024 /EINPresswire.com/ -- Neurotechnology, a provider of deep learning-based solutions and high-precision biometric identification technologies, today announced that its latent fingerprint matching algorithm submission has demonstrated improved performance in the National Institute of Standards and Technology (NIST) Evaluation of Latent Friction Ridge Technology (ELFT). This achievement strengthens Neurotechnology's position as one of the top five latent fingerprint recognition technology providers.

> We are pleased with the advancements in our latent fingerprint technology, which has achieved up to a threefold improvement in the NIST ELFT evaluation. We look forward to continuous improvement."
>
> *Evaldas Borcovas, Biometrics Research Team Lead for Neurotechnology*

The NIST ELFT evaluation utilized two key metrics: FPIR@FNIR (False Positive Identification Rate at a given False Negative Identification Rate) and FNIR@Rank (False Negative Identification Rate at a given Rank). The evaluation gallery comprises 1.6 million identity records used in all evaluation tests. Each test also incorporates samples from real cases provided by various law enforcement agencies, adds these samples to the main gallery and then assesses the algorithm's matching performance across the entire database.

Neurotechnology's algorithm has shown significant improvement over the company's previous NIST submissions, achieving up to three times the accuracy. Notably, it showed strong performance with the Michigan State Police - Distal dataset, with a FNIR at FPIR of 0.01, making it the second

most accurate among all submissions.

In the FBI-Provided Solved Dataset #1 the new submission has shown that in 92.05% of searches, the correct candidate was ranked first among potential matches. When operating without manual intervention, Neurotechnology's system, configured for a search error probability of 1 in 100 (FPIR 0.01), successfully identified the latent prints in 84.3 out of 100 possible searches (FNIR 0.157).

"We are pleased with the advancements in our latent fingerprint technology, which has achieved up to a threefold improvement in the NIST ELFT evaluation," said Evaldas Borcovas, Biometrics Research Team Lead for Neurotechnology. "Congratulations to my colleagues working on this algorithm; we look forward to continuously improving our results."

Neurotechnology's performance in the NIST ELFT evaluation showcases its commitment to delivering high-accuracy biometric solutions. The company's latent fingerprint technology demonstrates its efficiency and reliability, making it suitable for a wide range of applications, including law enforcement.

About Neurotechnology

Neurotechnology is a developer of high-precision algorithms and software based on deep neural networks and other AI-related technologies. The company was launched in 1990 in Vilnius, Lithuania, with the key idea of leveraging neural network capabilities for various applications, such as biometric person identification, computer vision, robotics and artificial intelligence. The company's solutions and products have been used in more than 140 countries worldwide and in many national-scale projects for national ID, passports, elections and border control, including India's Aadhaar program, general elections in Ghana and Liberia, voter deduplication for the Democratic Republic of the Congo and other projects that collectively process the biometric data of nearly two billion people.

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