



**Fighting insurance fraud  
with supercharged  
image detection**

FRISS is the leading provider of Trust Automation for P&C insurers around the world. They combine the power of expert knowledge, advanced analytics, artificial intelligence, and machine learning to provide end-to-end trust automations. Not only do they combat multifaceted and ever-evolving threats in insurance fraud, FRISS also helps streamline the underwriting and claims processes by enabling insurers to flag high risks throughout the insurance value chain.

Such risks encompass many different circumstances including inflated claims, misrepresentation of facts, identity theft, bogus claims, and organized criminal activities. Fraud detection systems must balance sensitivity to a variety of possible schemes without generating false accusations. The complex, ever-evolving nature of these investigations requires sophisticated tools and techniques.

Therefore, in 2016, FRISS formed a partnership with Levi9 to advance their platform and raise the bar in fraud detection for the insurance industry. The Levi9 team had full ownership within the project, handling everything from designing, developing, and deploying to production. This approach ensured seamless management of dependencies from end to end.

## **Supercharging image verification: speed and accuracy**

Insurers have a high volume of image data to analyze for insurance claims. They need to account for a range of discrepancies from poor image quality to intentional manipulation. It's a costly, high-stakes, and resource-intensive task that must be completed quickly and precisely.

That's why one of our biggest accomplishments with FRISS has been developing a critical component in their fraud-fighting arsenal. Our Image Screening API, developed between July and August 2020, verifies the authenticity and integrity of images used in insurance claims by performing several different assessments:

- Time analysis: Utilizes EXIF data from images, including timestamps of image creation, digitization, and editing.
- Location analysis: Analyzes GPS coordinates in EXIF data to pinpoint the exact event location or identify previously unknown locations.
- Reverse image check: Searches the internet to ensure submitted images are not misappropriated from online sources.
- Internal image check: Compares new submissions against a database of previously received images to detect duplicates or similarities.

This tool uses a two-pronged approach that efficiently and accurately processes large volumes of images. First, Difference Hash enables rapid image screening. Next, Perceptual Hash delivers a more detailed analysis of images that were flagged during the initial screening. With the enhanced Imaging Screening API, FRISS provides insurers with a powerful method for validating claims and protecting against fraudulent activities.



# End-to-end ownership and automation

Levi9's involvement didn't stop at the development phase. We integrated third-party APIs for image recognition, microservices, unit tests using xUnit, and automation using Postman. This end-to-end principal ownership demonstrates our dedication to meticulously executing every aspect of a project.

The technology we developed through this partnership can add value in many different industries where image verification and analysis are crucial. The Image Screening API is also a step forward in creating a more equitable insurance landscape. As Levi9 continues to advance and refine solutions with FRISS, we remain committed to their pursuit of excellence in combating insurance fraud.



**"FRISS image screening is an essential part of our Case Management solution for Fraud Investigators. Fraudsters trying to trick the system by submitting the same image over and over again are easily caught with this capability, even if the claimant altered the image to outsmart the investigator. By automating metadata checks such as time and location analysis of the image, we can also spot the obvious lies in an automated way. This saves investigators time and highlights risks without manual checks. FRISS brought the idea, and the expertise of Levi9 brought it to life."**



**Niek Verdoes**  
Head of Product

## Key words

C#

.NET

Entity Framework Core

MediatR

Polly

Serilog

Azure DevOps Pipelines

Azure Kubernetes Service

Azure SQL Database

microservices architecture

xUnit

Postman

Helm

