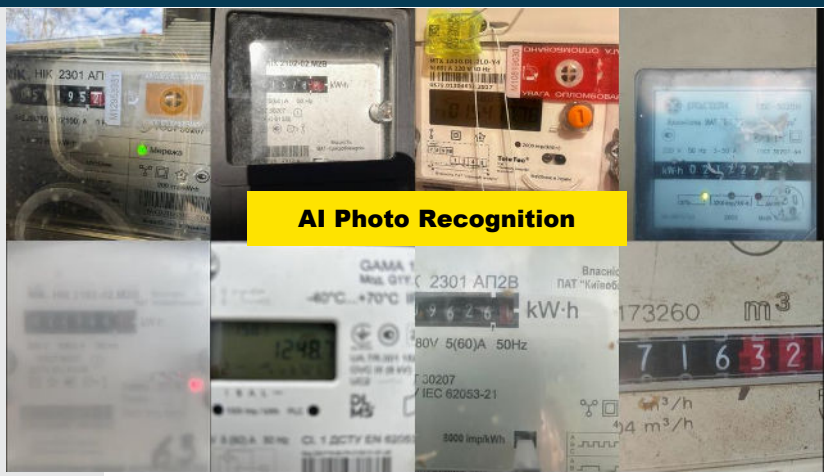
SUCCESS CASE 32.2026

Smart Meter Photo Recognition

AUTOMATIC AI RECOGNITION OF METER READING PHOTOS



THE CHALLENGE

When a controller cannot physically access a customer's meter during a scheduled inspection round, the customer is instantly notified via chatbot and asked to submit a photo of the reading. The project's goal was to process these customer photos automatically and reliably, without manual verification by a dispatcher. Every customer photo required manual verification by a dispatcher, creating a high manual workload. There was no visibility into why the AI model failed to read a photo correctly. Rapid growth in photo volumes, reaching up to 5,600 photos in a single day, posed a risk of service overload. Some submitted photos are physically unreadable due to glare, blur or obstruction, while others show the wrong meter type: gas instead of electricity.

THE SOLUTION

An automatic chatbot notification is sent the moment a controller cannot access the meter during a scheduled round, immediately requesting a reading photo from the customer. Customers can verify and submit their reading whenever convenient, instead of waiting for a repeat visit from the controller. The AI model automatically recognises the meter reading from the submitted photo and classifies the result as "Success", "Uncertain" or "Not Found". Every "Uncertain" case is classified into one of five root cause categories: glare/reflection, motion blur, obscured display, poor framing or other. The customer journey is automated from chatbot notification through photo submission and AI recognition to automatic Act generation. An analytics dashboard tracks daily volume, recognition quality and customer behaviour to guide product and infrastructure decisions.

MAIN ACHIEVEMENTS

A total of 17,541 photos were processed over a monitoring period of 19 days, from 13 to 31 July 2026. Of these, 91.6% were recognised successfully on the first attempt, with no manual intervention. The root cause of every "Uncertain" case was quantified, turning a vague 7.6% error rate into five concrete, actionable problems. Most "Not Found" cases were found to be gas meters rather than misread photos, identifying a model coverage gap rather than a photo quality issue. Customer behaviour patterns, including peak hours and peak days, were mapped to plan infrastructure scaling ahead of demand spikes. Photo volume grew by a factor of 10.1 over the monitoring period, confirming fast customer adoption of the channel for submitting photos.

KEY SUCCESS FACTORS

Glare/reflection is the single largest cause of uncertain recognition, accounting for 34.7% of all uncertain cases, or 461 photos. The "Other" and "Motion blur" categories were each shown to combine two to three distinct technical issues hidden within a single label. Photos in which the reading is physically obscured by a seal or wire account for 17.8% of uncertain cases. These require a hardware fix rather than a model fix. Peak submission activity is concentrated between 12:00 and 16:00, informing when extra review capacity is needed. The serial number match rate reached 81.0%, validated against the same photo set used for reading recognition. The daily uncertain rate remained within a band of 5.0% to 13.9% throughout the period, even as volume grew tenfold.

WAY FORWARD

The next steps are to split the "Other" and "Motion blur" categories into their true underlying causes to sharpen model retraining priorities, and to add gas meter recognition to address the largest share of "Not Found" cases. Further actions include scaling photo intake infrastructure ahead of seasonal peaks, based on the observed tenfold growth, and providing guidance within the chatbot on avoiding glare and keeping the reading fully in frame. The planned work also includes training the model to detect seal tampering and verify the meter's overall physical integrity directly from the submitted photo.

For more information about the project, please contact:
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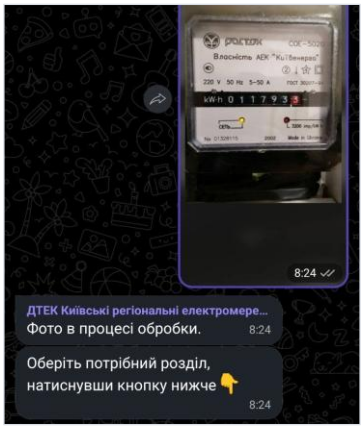
EVOLUTION OF THE SERVICE

Chatbot notifies customer



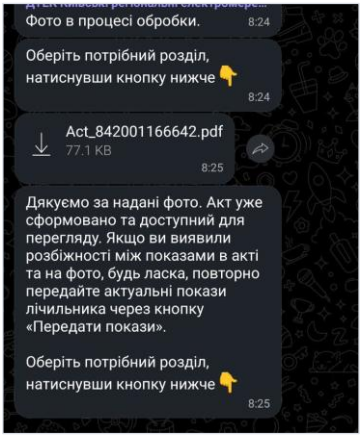
STEP 1

Customer submits meter photo



STEP 2

AI recognizes the reading



STEP 3

Result: Automatic Action

