



An AI-powered API for rapid and accurate reading of lateral flow tests

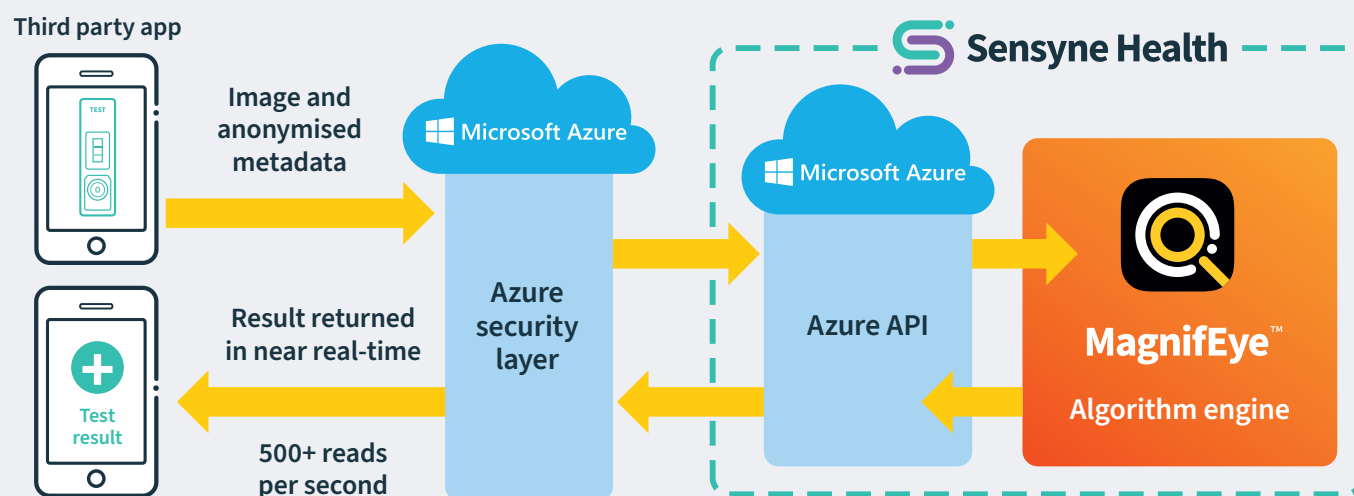
MagnifEye is a deep learning, cloud-based API that can read lateral flow test results beyond the human visible spectrum¹.

It can be quickly trained to read any lateral flow test, including quantitative and multiplexed assay tests. It is unique amongst test readers in its use of deep-learning from end-to-end, with results returned to the user in under 2 seconds.



How it works

The MagnifEye API can be easily integrated into existing apps and extended to include an image-capture flow, assisting individuals to take high-quality images.



NHS Digital conducted a pilot study in Apr 2021 that tested MagnifEye on over 100,000 real world cases

The results of the pilot study¹ show:

MagnifEye increased sensitivity (the ability to identify positive tests correctly) to 97.6% and specificity (the ability to identify negative tests correctly) to 99.99% in reading lateral flow tests, as compared to a human reader.

97.6%
Sensitivity

99.99%
Specificity

99.78%
Overall accuracy

1. Consortium, AI LFD and Beggs, Andrew D. et al 'Machine Learning for Determining Lateral Flow Device Results in Asymptomatic Population: A Diagnostic Accuracy Study.' ssrn.com/abstract=3861638

MagnifEye is aimed at

Lateral flow test manufacturers wanting to integrate AI capabilities into their app, to improve the reading of lateral flow tests

Smartphone reader developers requiring AI-based reading of lateral flow tests

Government bodies requiring AI capabilities to integrate with existing apps for mass testing programmes

Key features

Rapid, reliable and trusted test interpretation

- ✓ Objective, accurate reading beyond human visible spectrum
- ✓ End-to-end AI-powered process from image read to test result in <2 seconds.
- ✓ Anomaly detection algorithm - identifies damaged or fraudulent tests and other anomalies.
- ✓ Quality control algorithms check for size, brightness, shadows and inverted tests, helping to improve algorithm accuracy when used in real-world conditions.

Fully compliant with standards

- ✓ Developed under a quality management system certified to ISO13485:2016.
- ✓ GDPR compliant, ensuring high level of protection for personal data.
- ✓ Information Security Management System ISO27001 certification to ensure information security and governance requirements are fully met.



Potential benefits



Improve accuracy of reading lateral flow tests

By reading lines that may be missed by the human eye, the effectiveness of mass testing programs may be improved.



Speed and flexibility

Results returned to the user in under 2 seconds, and available for analysis immediately, improving user adoption and supporting rapid decision making.



Supports greater test usage

Easy to follow instructions with visual guides, helping the visually impaired or those who might otherwise find it difficult to take and read a test.



Developed and tested for real-world use

Advanced machine learning algorithm identifies anomalous tests and is robust to a range of image quality resolution.

For more information on availability, please contact:
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