



# AI-powered label verification



## **NexVision Revolutionises Label Verification in Meat Processing**

In the fast-paced world of meat processing, accuracy and efficiency are paramount. When a leading meat processing company faced challenges with their label verification process, they turned to CapitalAI for an innovative solution. This success story showcases how our cutting-edge NexVision technology transformed their operations, setting a new standard in the industry.



## Challenge

Our client, a prominent meat processing company, was grappling with several critical issues:

- Risk of product recalls due to labelling errors
- Increasing customer complaints about mislabelled products
- Costly rework resulting from late error detection
- Labor-intensive manual checks involving multiple teams

Their existing process was time-consuming and prone to human error. It involved production staff performing initial checks, followed by additional verifications by Product Quality Inspection (PQI) and Quality Assurance (QA) teams. This manual multi-step approach wasn't always efficient and left room for mistakes in crucial areas such as barcode accuracy, pricing, best-before dates and label application.

## Requirements

The client needed a solution that could address specific AI expectations for each critical aspect of label verification:

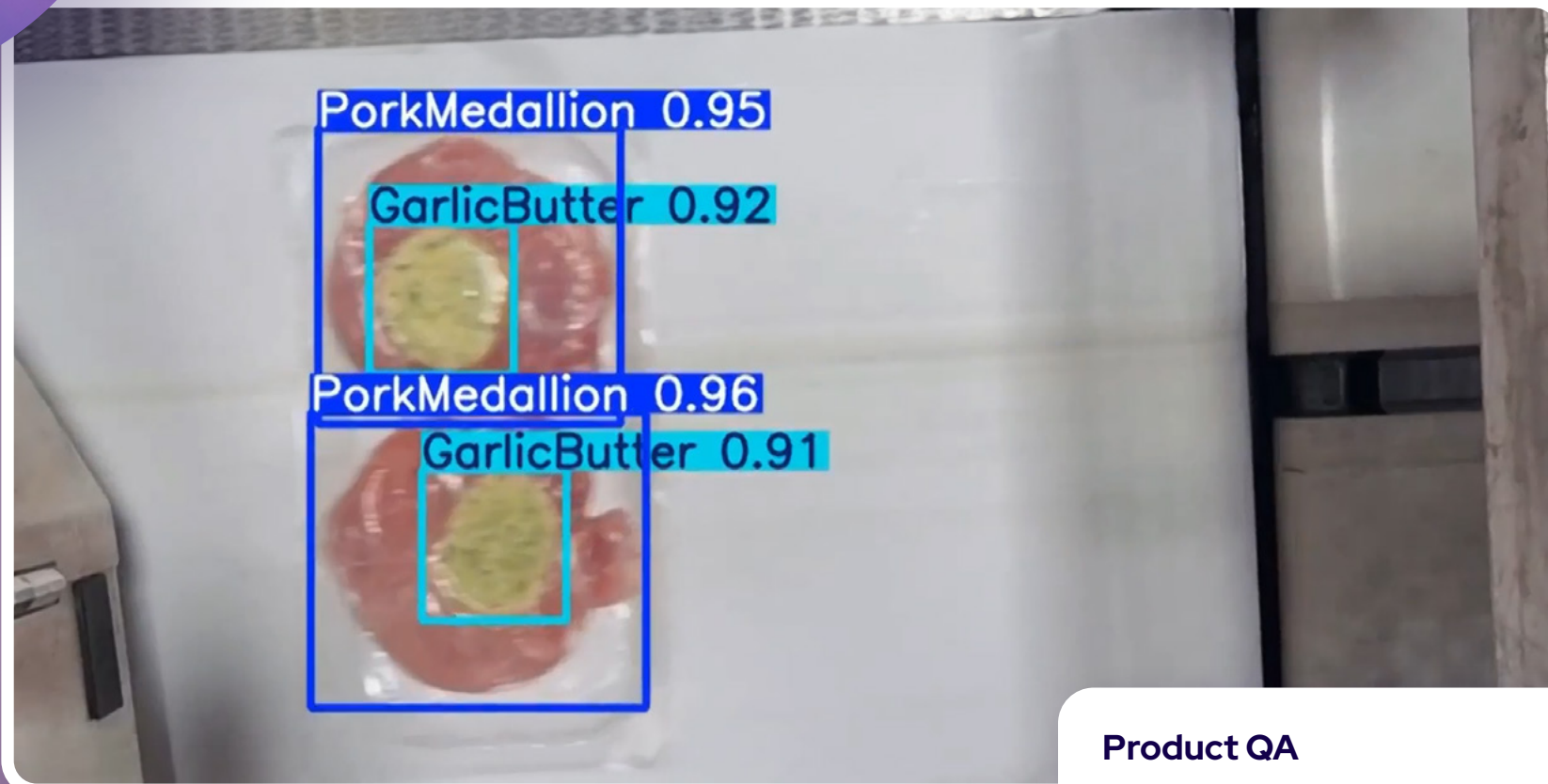
- **Bar Code:** Detect incorrect barcodes by scanning the printed code, checking against a reference, and confirming product information accuracy.
- **Pricing:** Identify incorrect prices on labels, including various formats like standard and promotional pricing. For random weight products, verify price/kg calculations against system data and production plans.
- **Best Before Date:** Confirm that the applied Best Before Date matches the number of days set in the system and production plan.
- **Correct Label Applied:** Use photo specifications for all Product Look-Up (PLU) codes to determine if the correct label is applied, including the ability to check artwork against standard references and flag differences.

## Solution

CapitalAI was approached by the client due to our unique understanding of the food processing industry and our extensive experience using Vision AI technologies. CapitalAI deployed its state-of-the-art NexVision system on a pilot production line at the client's facility. This industrial-grade Vision AI technology was seamlessly integrated with the client's existing production systems.

## How NexVision addressed the challenge

- **Real-time inspection:** High-resolution 4K cameras were installed above the production line, capturing detailed images of each product as it moved along the conveyor belt.
- **Advanced AI analysis:** NexVision's powerful AI algorithms analysed these images in real-time, checking them against system information and predefined standards.
- **Bar code:** NexVision scanned each barcode, cross-referenced it with the product database, and performed a test scan to confirm accuracy.
- **Pricing:** The system verified prices against the production plan and system data, including calculations for random weight products.
- **Best before date:** NexVision confirmed that the printed date matched the shelf-life information in the system.
- **Correct label applied:** Using a database of photo specifications, the AI compared each label to the correct reference, identifying any discrepancies in artwork or label type.
- **Immediate error detection:** When discrepancies were identified, NexVision could initiate various real-time actions, including stopping the production line, removing faulty products, or triggering audible or visual alerts.
- **Data storage and traceability:** All captured imagery and data were securely stored, enabling supply chain traceability and providing valuable information for ongoing training and system improvement.



### Product QA

Validate butter was applied to the meat during processing.

## Results

The implementation of NexVision yielded impressive results:

- **Enhanced accuracy:** The pilot project achieved 100% accuracy in label verification, significantly reducing the risk of recalls and withdrawals.
- **Increased efficiency:** By automating the verification process, NexVision dramatically reduced the reliance on manual checks, freeing up staff for other critical tasks.
- **Early error detection:** The system's ability to identify issues in real-time minimised rework and virtually eliminated the risk of mislabelled products reaching customers.
- **Improved customer satisfaction:** With more accurate labelling, customer complaints related to packaging errors decreased substantially.
- **Strengthened compliance:** NexVision's comprehensive checks ensured consistent adherence to both regulatory requirements and customer specifications.
- **Cost savings:** By preventing recalls and reducing rework, the client saw a notable decrease in operational costs.

## Conclusion

CapitalAI's NexVision has proven to be a game-changer in the meat processing industry. By addressing the critical challenge of label verification with precision and efficiency, we've helped our client enhance their operational efficiency, ensure product quality, and maintain regulatory compliance. Our AI-powered solution met and exceeded the specific expectations for barcode accuracy, pricing verification, date checking, and label application – all in real-time and with unparalleled accuracy. Following the success of the pilot, plans were made to expand NexVision's implementation across the entire facility.

As we continue to innovate and expand our AI-powered solutions, CapitalAI remains committed to driving excellence in food processing and packaging across the globe. Are you ready to revolutionise your label verification process? Contact CapitalAI today to learn how NexVision can transform your meat processing operations.

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