THE GAME-CHANGING POWER OF

Computer Vision
in Manufacturing

chooch

Take Your Production Line to a Higher Level with Computer Vision for Defect Detection

High quality. Cost savings. Those are the dual goals that rule every manufacturer's production operation. The key? Computer vision technology, which empowers manufacturers to reduce inspection-related slowdowns, increase yield, improve quality – and speed up product release timelines.

Computer vision solutions combine the judgment of the human eye with the processing power of a computer. Highly customizable AI models work with a network of cameras and edge devices, helping your manufacturing team:

» eliminate quality inspection bottlenecks
» automate assembly lines
» detect anomalies
» analyze real-time data for root cause determination

The Result: Flexible deployments, higher caliber products, and a competitive edge in your market.

According to Deloitte, Computer Vision is one of the many Artificial Intelligence solutions that will continue to transform manufacturing.[1]

Overcoming Human Defect Detection Strategy Challenges

Maintaining high quality products can be difficult and costly. Manual visual inspections may be required to ensure your products meet the highest quality control standards, but human inspectors come with built-in disadvantages, such as human error, downtime, training time and costs, or scaling challenges.

Imagine the typical anomalies that can happen on your product line – a labeling error, a misplaced part, a damaged product. Now imagine that your staff has missed one of those defects. You'll need to choose between destroying an entire lot of products or searching for a damaged product.

Should it be released into the marketplace – and into a customer's hands – brand embarrassment and customer loss is sure to result. A health risk could even lead to product liability and personal injury lawsuits.
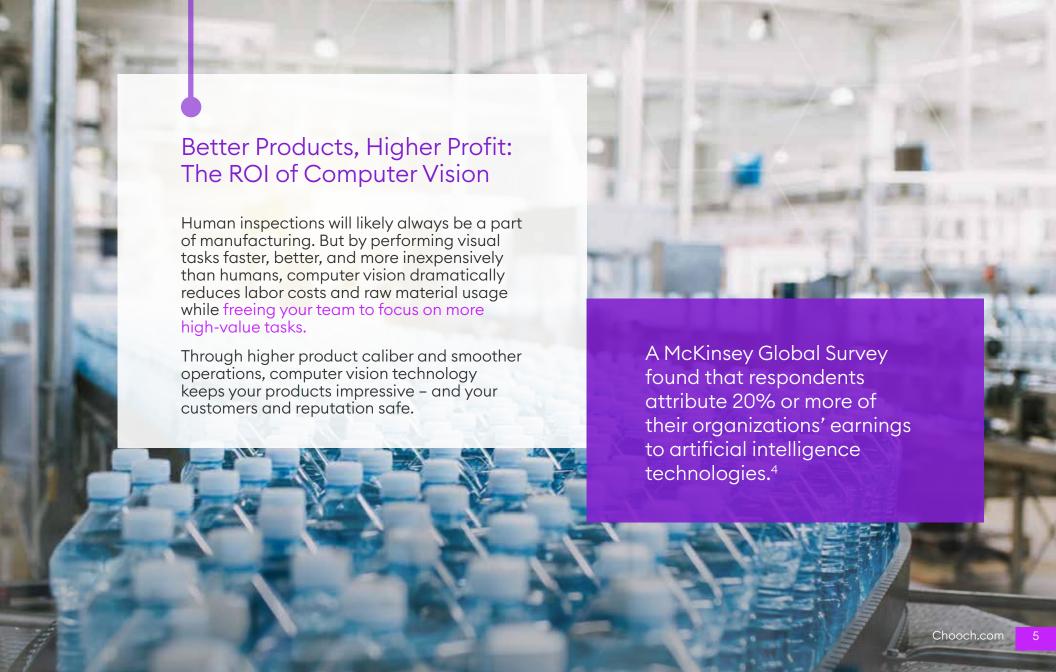
That's where computer vision tools come in to avert disaster. Because your manufacturing team can "see" and react to data in nearly real-time, they can make faster and smarter decisions. Your company will also enjoy fewer defects, better automation, lower costs, and greater scalability of manufacturing processes.

The cost of poor quality is as high as 15-20% of annual sales revenue, or billions of dollars annually for larger manufacturers.[2]

Computer Vision for Defect Detection in Action

Imagine now that your team can rely on computer vision solutions. High-resolution cameras can capture video or image data of the production line. Sophisticated AI models then evaluate any visual data, providing instant defect alerts to your team. They can quickly identify and replace defective products with greater efficiency and accuracy, reducing the high costs of manufacturing defects.

The computer vision solutions also ensure your equipment is working properly. Edge devices spot errors in faulty production lines, so your team can catch mistakes before they grow into a costly disaster – and keep your operations running at maximum productivity.

The average costs of a recall can exceed $1.65 million, rising to over $14.5 million, and almost $9.42 million for significant claims.[3]

Better Products, Higher Profit: The ROI of Computer Vision

Human inspections will likely always be a part of manufacturing. But by performing visual tasks faster, better, and more inexpensively than humans, computer vision dramatically reduces labor costs and raw material usage while freeing your team to focus on more high-value tasks.

Through higher product caliber and smoother operations, computer vision technology keeps your products impressive – and your customers and reputation safe.

A McKinsey Global Survey found that respondents attribute 20% or more of their organizations' earnings to artificial intelligence technologies.[4]

Chooch Computer Vision Platform Stats

37,718,899,200
IMAGES PROCESSED

94,329,278,222
OBJECTS DETECTED

8,088,508
ANNOTATIONS MADE

18,220
MODELS CREATED

11,791
DATA SETS GENERATED

About Chooch

Chooch creates and deploys the world's best Visual AI applications that are powerful, ingenious, and trustworthy, to make lives better. We are the only AI computer vision (CV) platform that instantly detects specific visuals, objects, and actions in video images, immediately comprehending their significance and instantly putting into motion pre-programed responses – all in a fraction of the time a human being could even notice there might be an issue. Chooch services multiple industries – manufacturing, public sector, retail, healthcare, and many more across fortune 500 companies with leading partners including Nvidia, Deloitte and HPE.

If you would like to learn more about Chooch and its range of Visual AI solutions, please visit chooch.com for more information.

Sources

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