Brain Builder for Industrial Inspections

Neurala's end-to-end platform streamlines creation, deployment, and analysis of custom vision AI solutions, making AI more accessible for industrial inspections and manufacturing.

Industrial product development requires quality control at scale, which is difficult to achieve. Manual inspections are costly, subject to fatigue and prone to errors, and while AI can help, it's frequently prohibitively expensive. Product managers are ultimately responsible for getting the product out the door on time and under budget, but the cost of mistakes can be extremely high, both in actual dollars and as well as unintended consequences.

Neurala's Brain Builder platform offers an end-to-end AI platform to create, deploy and analyze custom vision AI solutions at scale, ensuring thorough inspections and high-quality products.
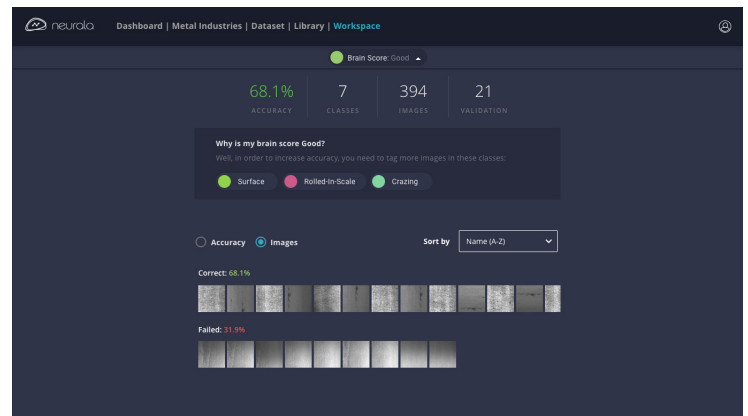
To Err is Human

While, in some cases, AI affords the opportunity for full automation, in most scenarios AI increases human inspector productivity and reduces fatigue by enabling them to focus solely on reviewing images that most likely contain defects. Given that industrial products are often developed within highly controlled and automated environments, it's the perfect opportunity to introduce vision AI inspections.

But, how does one go about building a vision AI system? It's not a task that most industrial companies are equipped to manage. Companies have to ask: can we afford to hire an AI expert to create and manage a vision AI system? Do our product developers have the time and expertise to integrate a system in our processes? Inspection systems also often require very specific and highly proprietary data, meaning training has to be highly specialized – and time consuming. What's more, due to the custom nature of industrial challenges or use cases, companies can rarely rely on an out-of-the-box AI solution.

Most companies end up building vision AI solutions on open source frameworks that lack the administrative and project management capabilities they need to achieve custom AI development at scale, consistency and repeatability.

Visual AI for Industrial Inspections

Neurala's Brain Builder platform eliminates guesswork and gives product developers a new tool to improve inspection efficiency and performance. The cost-effective, easy-to-use platform enables rapid prototyping, deployment and testing, giving companies the opportunity to craft and test an AI-based inspection process before deploying it to their assembly line.

The platform is easy to use without any AI experience, ensuring more time is spent on product development and less time is spent on training AI systems. Brain Builder also requires significantly less data to build an effective model, so companies can train their neural networks even when they have only a small sample of data (which is common since many use cases are unique), or the neural network is encountering new information on which it has not yet been trained.

Every company has its own unique workflows and problems it wants to solve, creating the need for customized and therefore, complex, AI solutions. With Brain Builder, industrial and manufacturing companies have the easy-to-use solution they need to take charge of the quality control process, while staying within budget.

Neurala is a pioneer in custom vision artificial intelligence. On a mission to make vision AI more accessible, Neurala is the company behind Brain Builder: a SaaS platform that dramatically reduces the time, cost and skills required to build and maintain production quality custom vision AI solutions. Founded in 2006, Neurala's research team invented Lifelong-DNN (L-DNN) technology, which reduces the data requirements for AI model development and enables continuous learning in the cloud or on the edge. Now, with customers in the drone, robotics, smart device, industrial inspection and AI professional services verticals, Neurala's technology has been deployed on 30 million devices globally.

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