



ARTICLE

ARTIFICIAL INTELLIGENCE IS UNLOCKING UNPARALLELED VALUE FOR FASHION BRANDS

LECTRA R&D TEAMS DEVELOP AN AI ASSISTED IMAGE-LABELING MODEL TO PROCESS HIGHER VOLUMES OF FASHION MARKET DATA, FASTER WITH LESS RISK OF ERROR.



LAURENT VEZARD

Data Science
Manager at Lectra



ARNAUD MELIN

R&D Director
at Retviews

Innovation, collaboration and agility are the hallmarks of an enduring competitive advantage. Fashion companies that invest in digital solutions and automation position themselves to achieve these key operational goals by leveraging big data and Artificial Intelligence (AI) to increase their productivity, profitability and overall performance.

Pushing the boundaries of innovation with AI

At Lectra, innovation is not a buzzword. It is a shared practice with its customers and internal stakeholders. Laurent Vezard, Data Science Manager at Lectra, says, **“Our approach is a collaborative effort. This is why we have been so successful at engineering best-in-class cutting solutions. The goal has always been about working together with people from across the value chain to increase productivity, streamline workflows and reduce waste. Our software offer is built on these same principles by developing the right solution for the right challenge.”**

Collaboration opens doors to pushing innovative boundaries and developing groundbreaking solutions. This was evident when a number of technology departments at Lectra, worked on improving the garment type and fabric pattern recognition capabilities of their automated fashion benchmarking software; **Retviews**.

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According to Arnaud Melin, R&D Director at Retviews, **“This collaboration allows us to stay ahead of the curve and deliver the best possible solutions to customers, enabling their success in the market. At Lectra, we create value by developing software that enables our customers to perform better in all areas of their business.”**

“As the life cycle for software is so much shorter than say industrial equipment,” says Laurent Vezard, **“it is valuable to have multiple R&D teams working together to help innovate faster. The ability to expedite research and development time to reduce costs and mitigate risks by resources is a big advantage when delivering software.”**

Artificial intelligence (AI) is an important aspect of Retviews’ ability to deliver these benefits. AI can monitor fashion assortments, sizing, and individual product characteristics—garment type and fabric pattern recognition—faster and more accurately than human labor.

With Retviews, customers can analyze their competitors’ products and receive real-time notifications to track their competitors’ pricing, to plan discounts, create assortments, and remain responsive to changing trends.

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Every day we process 8 million styles, including categorizing, coloring, and managing 150,000 new ones. Considering the multitude of colors per style, we need to process approximately 15-20 million images per month.

ARNAUD MELIN

The power of AI analytics and image data processing

Image data analysis powered by AI is revolutionizing how fashion brands process product data, understand their market, and interact with customers. The insights gained from image data analysis empowers fashion businesses to tailor their marketing strategies, optimize product offerings, and target content creation to improve customer satisfaction and sales performance.

#1 Efficiency and accuracy

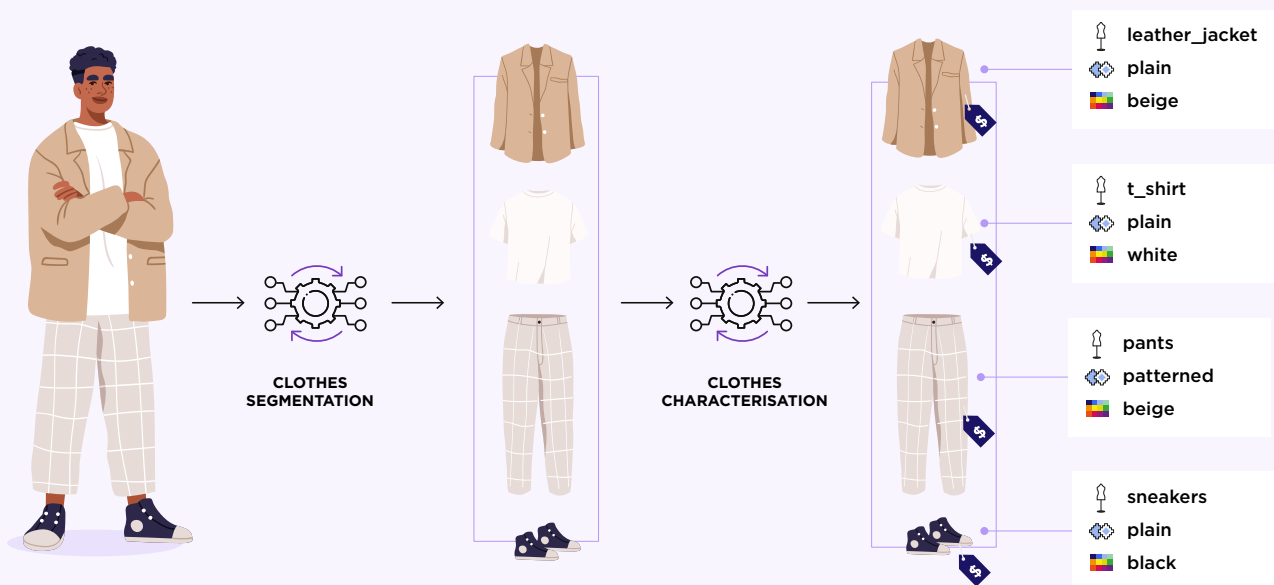
AI solutions offer a key advantage in rapidly processing and labeling large volumes of images. With **AI algorithms**, image-labeling tasks that would otherwise be time-consuming and prone to human error can be automated, saving valuable time and reducing the likelihood of mistakes.

#2 Coherence and consistency

AI models trained to apply consistent labeling standards across different images ensure uniformity and coherence in image categorization and tagging. This consistency is especially crucial in fields like **e-commerce and advertising**, where accurate and standardized image labeling can improve searchability and customer experience.

#3 Insight and understanding

AI’s advanced image segmentation and object detection capabilities enable **more precise and detailed image analysis**, leading to a deeper understanding of the content within the image. AI models can now better understand trend analysis, customer preferences, and competitor behavior.

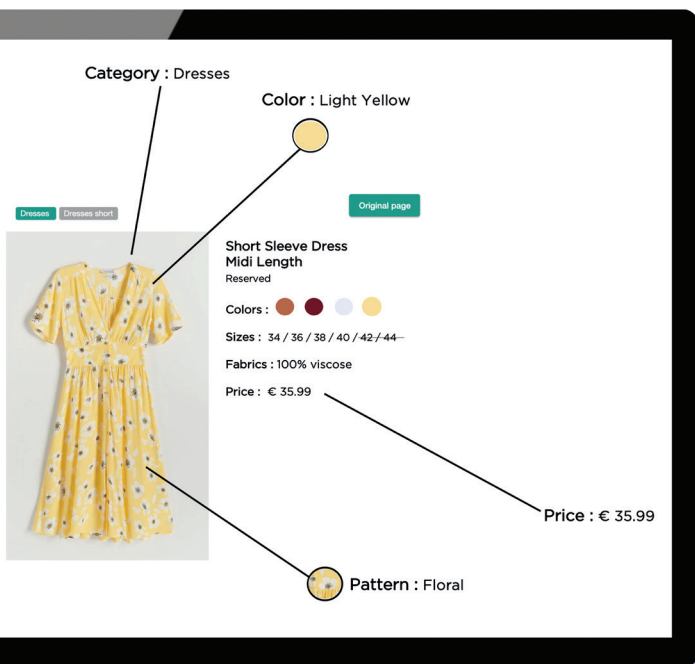


Recognition of patterns, colors and motifs in fashion images

Advancing AI techniques to enhance image labeling

Computer vision is a branch of Artificial Intelligence that uses AI models to teach computers how to understand and analyze information from images. It has the remarkable ability to analyze vast amounts of data, providing contextual suggestions and higher-quality search results.

Lectra's new AI-assisted image-labeling solution stands out as a breakthrough in the field, providing fashion brands with faster and more accurate garment image processing and labeling. It achieves this by improving computer vision techniques like image segmentation, category automation, and object detection processes. The AI solution makes it easier and quicker to identify key points in a garment's image.



“Innovation is a key component of competitiveness”

AI enabled Segmentation + Characterization = Enhanced Automated Data Labeling

Segmentation or refined localization in an image, improves the ability for the AI to identify clothing in the image and thus the power of categorization to collect the right data about an image and deliver greater analysis about the image.

Context This includes any possible changes in the colors of a garment in the image due to light reflected by the elements of the setting, shadows, and the camera used to capture the image.

Perception How image resolution, zoom levels, and shooting can influence the keywords given to a pattern or how the viewpoint of the image makes a pattern visible or invisible.

Characterization enabled by “AI natural image management” is able to locate zones in an image that contain clothing and then characterize the fine details of each of these zones to extract a wide range of information about the clothing, such as garment type, dominant color and fabric pattern.

At Lectra, innovation is about transforming customer processes by leveraging advanced technologies to optimize and automate production workflows.

With the integration of Internet of Things (IoT), big data analytics, and artificial intelligence (AI), our Industry 4.0 solutions enable fashion businesses to engage with their customers in new and meaningful ways. In particular, our new AI assisted image-labeling solution improves AI algorithms and techniques to automatically, assign and generate image labels for large datasets.

The result is improved efficiency, accuracy and analysis of fashion products, including garment type and fabric pattern recognition capabilities.