

Topics

Konica Minolta's Paper on Object Detection AI Accepted by ICIP 2025, an International Conference on Image Processing

Tokyo (July 18, 2025) – Konica Minolta, Inc. (Konica Minolta) announced that the Company's paper on object detection AI technology was accepted by ICIP 2025, an international conference on image processing.

First held in 1994, ICIP (IEEE International Conference on Image Processing) is one of the largest international scientific conferences in the world specializing in image processing and computer vision, and its long history makes it one of the most prestigious international conferences in the field.

This year, ICIP will be held in Alaska, U.S., from September 14 to 17. For ICIP 2025, 40% of research papers contributed from around the world were accepted. Acceptance of Konica Minolta's paper demonstrates that its research on AI technology related to object detection is highly evaluated.

Outline of the Paper

Title:

Frozen Network Few-Shot Object Detection

Authors:

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Summary:

In object detection in special environments, such as factories and medical facilities, Few-Shot object detection has attracted attention because of its ability to detect site-specific objects at respective sites with a small dataset.

In this paper, the authors developed a framework for enhancing detection performance based on visual features of new objects without modifying the structure of the AI model by using an object detection model pretrained on a large dataset of images and text.

This framework is expected to significantly reduce the compute cost and system maintenance cost without the need to retrain and reverify AI models that have been implemented on site. In the experiment of this paper, accuracy exceeding that of conventional methods was attained by using publicly available datasets, confirming the effectiveness of the framework.

The content of this paper will also be presented at the 28th Meeting on Image Recognition and Understanding (MIRU 2025), one of the largest conferences in Japan focusing on image recognition (July 29 to August 1, 2025 at Kyoto International Conference Center).

Konica Minolta remains committed to increasing its business value and taking on challenges to solve social issues through the combination of technology development and AI technology to meet the emerging needs of society and people to “see” based on five material issues.

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