Special Issue

Computer Vision for Food Data Analysis: Methods, Challenges, and Applications

Message from the Guest Editors

Recent advances in computer vision, particularly in generative AI, large language models, and multi-modal learning, present promising new directions for addressing challenges on food recognition. This Special Issue aims to explore innovative approaches in advancing our ability to analyze and understand food through visual data. We seek contributions that advance both fundamental computer vision techniques and practical applications in food-related tasks.
Submissions may include, but are not limited to, the following topics:

- Food image/video generation and generative AI;
- Food video analysis and action recognition;
- Food 3D model reconstruction;
- Food portion/nutrition value estimation;
- Food manipulation understanding;
- Food image quality analysis/inspection;
- Eating and cooking action recognition;
- Multi-modal food data analysis;
- Food ontologies and LLM-based models for food data analysis;
- Visual question answering for food;
- Food data analysis and uncertainty modeling;
- Learning with noisy food labels;
- Continual, self-supervised, semi-supervised, and unsupervised learning for food;
- Food classification/detection/segmentation in 2D/3D.

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About the Journal

Message from the Editor-in-Chief

The imaging term, specific with journal, is to be considered in its broadest sense. Image processing, image understanding and computer vision are all terms related to imaging acquisition, its processing and the extraction of relevant information from the scene to obtain the underlying knowledge. All tasks related to the above items are oriented toward specific applications in a broad range of areas and topics. The *Journal of Imaging* is conceived as an efficient vehicle in the scientific community for the communication and transmission of the progress and research results in the topics covered.

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