

## Special Issue

# Artificial Intelligence for Food Intake Measurement in Free-Living Settings

### Message from the Guest Editors

Accurate, scalable measurement of dietary intake in real-world, free-living settings remains a core bottleneck in public health nutrition and chronic-disease prevention research. Traditional methods (e.g., recalls, food records) are burdensome and error-prone, while gold-standard reference methods (e.g., weighed records, doubly labeled water) are costly and difficult to deploy at scale. Artificial intelligence creates new opportunities to improve both the precision and feasibility of dietary assessment outside laboratory environments. This Special Issue will showcase innovative AI-enabled approaches for food intake measurement, including—but not limited to—computer vision for food recognition and portion estimation; multimodal assessment integrating images with text/voice input and wearable or sensor data; large language models and machine learning for automated food logging, coding and nutrient estimation. We welcome contributions addressing validation, calibration against reference methods, robustness across contexts and bias/fairness considerations to ensure equitable performance across diverse populations.

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### Deadline for manuscript submissions

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### Message from the Editorial Board

*Nutrients* is an on-line open access journal that was first published in 2009. *Nutrients* adheres to rigorous peer-review and editorial processes and publishes only high quality manuscripts that address important issues related to the impacts of nutrients on human health. The Impact Factor of *Nutrients* has risen rapidly since its establishment and it is now ranked in the first quartile of journals publishing in the field of nutrition and dietetics research.

### Editors-in-Chief

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