

## **A critical review on computer vision and artificial intelligence in food industry**

### **ABSTRACT**

Emerging technologies such as computer vision and Artificial Intelligence (AI) are estimated to leverage the accessibility of big data for active training and yielding operational real time smart machines and predictable models. This phenomenon of applying vision and learning methods for the improvement of food industry is termed as computer vision and AI driven food industry. This review contributes to provide an insight into state-of-the-art AI and computer vision technologies that can assist farmers in agriculture and food processing. This paper investigates various scenarios and use cases of machine learning, machine vision and deep learning in global perspective with the lens of sustainability. It explains the increasing demand towards the AgTech industry using computer vision and AI which might be a path towards sustainable food production to feed the future. Also, this review tosses some implications regarding challenges and recommendations in inclusion of technologies in real time farming, substantial global policies and investments. Finally, the paper discusses the possibility of using Fourth Industrial Revolution [4.0 IR] technologies such as deep learning and computer vision robotics as a key for sustainable food production.