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Uses and new opportunities of computer vision and artificial intelligence for quality and hygiene controls in food production lines

Abstract:

The uses areas of computer science, monitoring systems and artificial intelligence are increasing day by day. Digital images, image processing, near infrared, mid infrared, magnetic resonance imaging, ultrasound are used for quality and hygiene control in food producing factories. In particular, food quality and hygiene controls based on image processing have been more widely adapted to production lines. On the other hand, the use of computer vision-based applications such as NIR or MRI in the food industry generally remains within the scope of research or laboratory-scale studies. This study focuses on the use and new opportunities of computer vision and artificial intelligence for quality and hygiene controls in food production. In the study, introductory information is also presented about the grouping of both raw and processed olives according to their hardness with NIR spectral reading. Some new uses in personal hygiene control for food industry by using artificial intelligence which was based on visual indicators were presented. Developing such innovative measurements and control tools that can be adapted to production lines can reduce waste of time and resources. It has the potential to provide higher quality and more reliable production. Performing controls in real time also provides the opportunity to intervene and correct errors as soon as they occur.

Biography

Dr. Yasin OZDEMIR has completed his PhD at the age of 29 years from Namık Kemal University. He is the researcher of Ataturk Central Horticultural Research Institute. He has published more than 30 papers in reputed journals and has been serving as an editorial board member of Bahçe Journal. He has 3 patent registration about food processing.