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The importance of computer vision technology is growing with increasing interest in smart agriculture

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The computer vision technology has played crucial role in several agricultural applications such as weed control, crop fertilization, plant species recognition and detection, growing phase determination, plant disease detection, harvesting fruits, etc. These applications are growing in importance with increasing interest in smart agriculture.

Many researchers have developed computer vision (image processing) methods as guidance for machine vision, working in different fields and environments (under controlled and uncontrolled conditions). The machine vision technology has shown a potential for success in a number of case studies, especially in robotic weed control systems, despite some serious challenges that will be discussed in this talk. I will also present the most available image-based plant segmentation techniques as well as my recent contribution to automatic crop detection against various weather conditions.

Biography

Esmael Hamuda is currently Ph.D student at the National University of Ireland at Galway (NUIG). He is also working part time at the NUIG as a teaching assistant. Esmael received a Bachelor's degree from Almergibe University, Libya in Electrical and Computer Engineering. He received a Master's degree from Universiti Teknologi Malaysia at Johor Bahru in Electronic and Telecommunication Engineering. He previously held a head position of Electrical Engineering department at the University of Almergib in Libya for 3 years. Specific interests are object detection, recognition, and tracking. He recently published two journal papers that related to plant detection and segmentation.