Applications of Deep Learning Techniques in Agriculture : A Review

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Abstract: *Agriculture is one of the major industries in the world. With promising results and enormous capability, deep learning technology has attracted more and more attention to both theoretical research and applications for a variety of image processing and computer vision tasks. In this paper, the author investigate research contributions that apply deep learning techniques and ML to the agriculture domain. Different types of deep neural network architectures and ML techniques in agriculture are surveyed and the current state-of-the-art methods are summarized. The main objective of this paper is to find the various applications of Deep learning in agriculture such as for irrigation, weeding, Pattern recognition, crop disease identification etc. The paper reviews the specific employed deep learning models, the source of the data, the performance of each study, the employed hardware and the possibility of real-time application to study eventual integration with autonomous robotic platforms. The survey shows that deep learning-based research has superior performance in terms of accuracy, which is beyond the standard machine learning techniques nowadays.*

Keywords: Deep learning, agricultural robots, crop management, artificial intelligence, precision livestock farming

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