

Reviewing the Trend in Image Processing Techniques Used in the Agriculture Industry.

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Abstract - Agriculture is the backbone of the global economy. With the increasing pressure and demand on agricultural systems to make the industry smarter, there is a need to focus on the void to be filled. A first step to achieving the sustainable development goals in farming, can be to leverage remote sensing to maximize the efficiency on the farm. In this paper, a comprehensive review is dedicated to the state of the art of image processing techniques used in agricultural applications and later encouraging the use of Artificial Neural Networks for more precise feature extraction. The works that we analyze can be categorized in the following application domains of precision farming: a. Crop/Vegetation management b. Land management c. Soil management. With fields growing larger, better monitoring systems are needed for automated management to reduce expenses. Hence, by applying Artificial Intelligence (AI)-powered solutions, farmers will be able to do more work with less effort and improved quality. This paper reviews the concepts, tools and the potential solutions to the agriculture industry and the need for better image processing techniques in remote sensing.

Keywords: Deep Learning, Machine learning, image processing, Remote sensing.