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Chapter 22
A Survey of Weed Identification Using Convolutional Neural Networks

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ABSTRACT

Weeds are the major source of concern for farmers, who anticipate that weeds may lower crop productivity. Thus, it is essential and vital to detect weeds. Traditional weed classification methods such as hand cultivation with hoes have many hindrances such as labour cost and time consumption. Currently, weed reduction farmers are using herbicides, but they have a negative impact on farmer health as well as on the environment. So, farmers want to lower the use of herbicides. Precise spraying is one of the methods in present-day agriculture to lower the usage of herbicides and to destroy the weeds with the assistance of new technologies. Deep learning approaches are already being employed in a variety of agricultural and farming applications and gave better results. This chapter uses convolution neural networks to provide a short overview of some significant agricultural research endeavours. Different architectures of CNN for classification and detection were used. In the sector of agriculture, the authors have outlined the notion of CNNs.