

Plant Disease Detection using CAE and CNN

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Abstract: *Plant illness recognition is a gigantic issue and frequently need proficient support to distinguish the sickness. Plants are susceptible to different illnesses in their developing stages. Early discovery of sicknesses in plants is one of the most difficult issues in farming. On the off chance that the sicknesses are not distinguished in the beginning phases, then they may unfavorably influence the all out yield, bringing about a diminishing in the ranchers' benefits. To conquer this issue, numerous scientists have introduced different cutting edge frameworks in light of Deep Learning and Machine Learning draws near. Nonetheless, the greater part of these frameworks either use a large number of preparing boundaries or have low characterization correctnesses. The proposed cross breed model requires lesser number of preparing boundaries when contrasted with different methodologies existing, we are attempting to. Our venture is pointed on making Application that distinguishes the sort of infection that impacted the plant from the pictures of the leaves of the plants. We are utilizing novel cross breed model in view of Convolution Autoencoder (CAE) organization and Convolutional Neural Network (CNN) for programmed plant sickness recognition. In this work, the proposed half and half model is applied to distinguish Bacterial Spot illness present in plants utilizing their leaf pictures; notwithstanding, it very well may be utilized for any plant sickness discovery involving any Image as info.*

Keywords: Plant Disease Detection, Convolutional Autoencoder, Convolutional Neural Network, Deep learning in agriculture

REFERENCES

- [1]. Many researchers across the world explored different Machine Learning (Es-saady et al., 2016; Islam et al., 2017; Krithika and Selvarani, 2017; Padol and Yadav, 2016)
- [2]. Deep Learning (Golhani et al., 2018; Ramesh and Vydeki, 2020; Sharma et al., 2019)
- [3]. Image Processing (Marwaha et al., 2012; Ngugi et al., 2020; Qin et al., 2016; Tewari et al., 2020)
- [4]. Soft Computing (Singh, 2019; Singh and Misra, 2017), and Semantic Web-based (Jearanaiwongkul et al., 2018; Marwaha et al., 2009) techniques to automate plant disease detection.