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Potato Blight Classification Android Application using Deep Learning

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Abstract: *Farmers who grow potatoes suffer from significant financial losses each year due several diseases that affect potato plants. The most common diseases are Early and Late Blight , caused by fungus and specific microorganisms, respectively. Early detection and appropriate treatment can save a lot of waste and prevent economic losses. However, traditional visual inspection methods are time-consuming and prone to errors. To address this challenge, we propose a Convolutional Neural Network (CNN) approach for plant disease diagnosis. CNNs are a type of deep learning algorithm widely used for image classification tasks. They can automatically learn features from input image data, making them well-suited for plant disease diagnosis. Our customized CNN has fewer trainable parameters, reducing computation time and minimizing information loss. We used several convolutional and pooling layers, followed by fully connected layers with the ReLU activation function. We also applied dropout regularization to prevent overfitting. In conclusion, accurate and efficient plant disease diagnosis is essential for preventing economic losses. Our customized CNN for plant disease diagnosis has the potential to be an effective tool for farmers. It can help them diagnose plant diseases quickly and accurately, leading to timely treatment and reduced loss.*

Keywords: Potato Blight, Disease detection, Convolutional Neural Network, Deep learning, Image Processing

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