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(57) Abstract :
ABSTRACT The present disclosure describes a system (100) for automated diagnosis of banana leaf diseases, comprising an unmanned aerial vehicle (102) equipped with a high-resolution camera for capturing aerial imagery of banana crop fields; a data acquisition module (104) for obtaining a set of images of banana crop leaves; a vision transformer module (106) configured to process the acquired images, wherein the vision transformer module (106) comprises: a tokenization and patching unit (108) for dividing the input images into non-overlapping patches; an embedding layer (110) for linearly embedding the image patches into a sequence of vectors; and a transformer encoder (112) comprising multiple layers of multi-head self-attention mechanisms and feedforward neural networks; a classification module (114) for categorizing the processed images into distinct banana disease classes; and an output module (116) for presenting the results of the disease diagnosis. FIG. 1

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