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(57) Abstract :
ABSTRACT Disclosed herein is a real-time artificial intelligence-based system (100) for plant disease detection and agricultural advisory, the system (100) comprising a plurality of cameras (102) configured to capture crop images exhibiting potential disease symptoms, a plurality of sensors (104) configured to record real-time soil physiochemical parameters and climatic condition readings, a user interface (106) integrated into a user device (108) and configured to receive crop-specific metadata and user-defined queries from a user, a communication network (110) and a processing unit (114) configured to evaluate the crop-specific metadata and user-defined queries in real-time for generating context-aware agricultural recommendations, wherein the processing unit (108) further comprises a data acquisition module (118), a preprocessing module (120), a feature extraction module (122), a disease detection module (124), a disease spread analysis module (126), a response generation module (128) and an output module (136).

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