

Medical Plant Recognition and Classification using CNN

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Abstract: Medicinal plants have been integral to human healthcare for centuries, serving as a vital source of natural remedies and pharmaceutical compounds. Classifying medicinal plants is critical to understanding their diversity, properties, and potential applications. This abstract provides an overview of the classification of medicinal plants, encompassing traditional, ethnobotanical, and modern approaches. Conventional classification systems are often rooted in cultural practices, where plants are categorized based on their local or indigenous uses. Ethnobotanical knowledge plays a significant role in these systems, as it captures the wisdom of generations and the unique insights of various communities. Modern classification methods have evolved to include botanical taxonomy, phytochemical profiling, and genetic analysis. Botanical taxonomy classifies medicinal plants based on morphological features, while phytochemical profiling identifies the bioactive compounds responsible for their therapeutic properties. Genetic analysis has shed light on the evolutionary relationships among medicinal plant species through techniques like DNA barcoding. Moreover, the abstract highlights the importance of medicinal plant conservation and the sustainable management of these valuable resources. Many medicinal plants are endangered due to over-harvesting, habitat destruction, and climate change, emphasizing the need for conservation efforts to preserve their biodiversity.

Keywords: Machine learning; Mental health; Medical Plant Classification; Feature extraction; Convolutional neural networks;