### INFORMATICS INSTITUTE OF TECHNOLOGY

In Collaboration with

UNIVERSITY OF WESTMINSTER



University of Westminster, Coat of Arms

# "Plant AI"

Ayurvedic Plant Identification using Image Processing and Artificial Intelligence

A Dissertation by

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### 05/2023

Submitted in partial fulfilment of the requirements for the BEng in Software Engineering degree at the

University of Westminster.

# Abstract

The Ayurvedic medicine, known for its rich heritage and holistic healing approach, hinges on the accurate identification and understanding of various medicinal plants. This identification, however, can be challenging for many, particularly those without extensive knowledge in botany. To bridge this knowledge gap, the Ayurvedic Plant Identification and Utility Mobile Application has been developed. This innovative application, leveraging advanced deep learning techniques, is programmed not only to accurately identify images of plants but also to provide useful information about their Ayurvedic plants. This amalgamation of artificial intelligence and the profound wisdom of Ayurveda marks a significant stride in the field. The application is designed with an intuitive user interface, ensuring ease of use for a wide spectrum of users. It employs a rigorously tested and validated deep learning model, guaranteeing precise plant identification and relevant Ayurvedic usage information. The Ayurvedic Plant Identification and Utility Mobile Application democratizes access to critical information about medicinal plants, making Ayurveda more accessible to practitioners, students, and enthusiasts. This convenience enhances the user's ability to accurately identify and understand the medicinal applications of different plants. This application is set to revolutionize the domain, seamlessly marrying cuttingedge technology and the ancient wisdom of Ayurvedic medicine. By enhancing knowledge accessibility and understanding, it plays a significant role in promoting the growth and propagation of Ayurveda in the modern world.

Keywords: Ayurveda, Plant Identification, Deep Learning, Mobile Application, Ayurvedic Uses, Image Recognition