

Medical Plant Species Detection:

Project Description:

The goal of this project is to develop a plant species detection system using Convolutional Neural Networks (CNN) in Python. The project involved comparing the performance of various CNN models such as Inception V3, Xception, and other CNN models. The project also recorded the accuracy of each model to determine which model performed best on the Indian medical plant species dataset.

The CNN models were used to classify images of plant species based on their visual features. The models were trained on a dataset of plant species images and then tested on a separate validation set to determine their accuracy. The project used the TensorFlow and Keras libraries in Python to build and train the CNN models.

After training the CNN models, the project compared their accuracy and performance to determine which model performed the best. The results showed that Inception V3 performed the best on the Indian medical plant species dataset, achieving the highest accuracy among all the models.

The following table summarizes the technologies and CNN models used in the development of this project:

Technology/CNN Model	Purpose
Python	Main programming language used for building and training CNN models
TensorFlow	Open-source software library used for building and training machine learning models
Keras	High-level neural networks API used for building and training deep learning models
Inception V3	CNN model used for image classification
Xception	CNN model used for image classification
Other CNN Models	Other CNN models used for image classification

Project Summary

Overall, this project provides a useful tool for plant researchers and professionals to classify plant species based on their visual features. The project's use of various CNN models and technologies ensures that it is flexible and scalable for future development. Additionally, the project's accuracy results provide insight into which CNN models perform the best on plant species classification tasks.