North East University Bangladesh

Department of Computer Science and Engineering

Course Title: Deep Learning Lab

Course Code: CSE-460

Project Proposal for Flower Classification

Submitted By : MD Asraf Uddin Rafi
Reg. No: 0562210005101006
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Overview

This project focuses on creating a **flower classification** model using deep learning techniques in Python with TensorFlow. The model is designed to identify and classify various flower species through an optimized deep learning pipeline, ensuring high accuracy and real-time usability via deployment as a web application.

Objective

The primary object of this project is to develop a robust **flower classification** system that uses state-of-the-art image processing and deep learning techniques. The project aims to provide a real-world application for identifying flower species, using TensorFlow's powerful tools for training and optimizing deep neural networks.

Goal

1. **Accurate Image Classification**

2. **Understanding Deep Learning Workflows**

3. **Real-World Deployment**

Tools & Technology

- TensorFlow
- Keras

Expected Outcomes

- A high-performing flower classification model capable of distinguishing between multiple species.
- Deployment of the model in a web application for real-time usage.
- Hands-on experience with deep learning workflows and TensorFlow

Conclusion

This project is an opportunity to explore deep learning applications in botany and agriculture. By utilizing techniques like CNNs, data augmentation, and hyperparameter tuning, the model will achieve state-of-the-art performance. Deployment as a web application will demonstrate the practical relevance of AI in real-world scenarios.