Project Design Phase-I
Proposed Solution Template

Date	30 October 2023
Team ID	SI-GuidedProject-611456-1698332996
Project Name	Dog Breed Identification Using Transfer Learning
Maximum Marks	2 Marks

Proposed Solution Template:

Project team shall fill the following information in proposed solution template.

S.No.	Parameter	Description
1.	Problem Statement (Problem to be solved)	Dog lovers and buyers want to know the breed of dog. Veterinarians want to know the breed to treat the dog easily or recommend the food intake for dogs, so we need to create an application which tells the breed of the dog using machine learning.
2.	Idea / Solution description	Develop an user friendly web application using deep learning techniques, which predicts output accurately and Q&A with dog experts. Advices will be given by veterinarians through this application.
3.	Novelty / Uniqueness	Use of transfer learning techniques for breed identification ensures precision. By leveraging pre-trained CNNs from large datasets such as ImageNet, the model was able to be trained with a small dataset. Here we can use fine tuning and feature extraction for getting better accuracy.
4.	Social Impact / Customer Satisfaction	By accurately predicting the breed it helps to better care and also prevents unethical breeding practices. Understanding a breed-specific traits and health issues allows the owners and the veterinarians to provide better care. Breed identification can help as an education tool that helps the owners to learn more about their dog, their history and their behavior. This also challenges breed-based stereotypes and discrimination, resulting in more humane treatment of all dog breeds.

5.	Business Model (Revenue Model)	Dog breed identification can be used by pet retailers and breeders to give accurate information about the breeds they have. This assists prospective buyers in selecting a dog that best suits their needs in terms of compatibility, lifestyle, and preferences. The growth and expansion of pet services and products can be influenced by the identification of dog breeds. Pet service providers, including trainers, groomers, and veterinarians, can customize their services to cater to the specific requirements of various breeds by having a thorough understanding of specific breed characteristics. Additionally, it can guide the creation and promotion of goods like toys, food, and accessories tailored to a particular breed.
6.	Scalability of the Solution	In the further works, the model is scalable to an extent such that it can predict disease of the dog, which helps veterinarians diagnose the disease easily and cure the particular breed easily.