Project Design Phase-I
Proposed Solution Template

Date	07 November 2023
Team ID	Team-592393
Project Name	Dog Breed Identification using Transfer Learning
Maximum Marks	2 Marks

Proposed Solution Template:
Project team shall fill the following information in the proposed solution template.

S.No.	Parameter	Description
1.	Problem Statement (Problem to be solved)	Dog breed identification is a challenging and valuable problem in the field of computer vision and machine learning. It involves training a machine-learning model to classify dog images into specific breed categories. The main problem to be solved in this context is to develop a robust and accurate dog breed identification system using transfer learning.
2.	Idea / Solution description	The proposed solution aims to develop an accurate and reliable dog breed identification system using transfer learning with the VGG19 architecture. This system will take an input image of a dog and predict its breed, providing valuable information to dog owners, veterinarians, adoption centers, and researchers.
3.	Novelty / Uniqueness	Developing a robust system for identifying mixed-breed dogs. Mixed-breed dogs are common, and accurate identification of their genetic composition is a challenging and unique feature.
4.	Social Impact / Customer Satisfaction	Accurate dog breed identification can help potential pet owners better understand the specific needs and characteristics of a breed, ensuring a better match between dogs and owners. It can educate the public about different dog breeds, promoting

		responsible pet ownership, and dispelling misconceptions and stereotypes associated with certain breeds.
5.	Business Model (Revenue Model)	Companies in the pet industry can use dog breed identification to offer personalized products, services, and recommendations to dog owners, leading to increased sales and customer loyalty. The technology can assist pet insurance companies in assessing risk and pricing policies more accurately based on the identified breed and associated health risks.
6.	Scalability of the Solution	The model should be designed to handle a growing number of dog breeds. This can be achieved by using neural network architectures that can accommodate an increasing number of output classes. Additionally, the model can be updated over time to include newly recognized dog breeds.