Project Design Phase-I
Solution Architecture

Date	07 November 2023
Team ID	Team-592393
Project Name	Dog Breed Identification using Transfer Learning
Maximum Marks	4 Marks

Solution Architecture:

Deep learning algorithms excel in recognizing these distinctive traits and patterns in images, enabling accurate predictions regarding a dog's breed. Our approach employs the power of Transfer Learning, specifically utilizing the VGG19 architecture, to tackle dog breed identification. To accomplish this, we rely on a substantial dataset of labelled dog images, which is essential for training the model effectively. This dataset must encompass images representing a wide array of dog breeds, with each image meticulously labelled with its corresponding breed.

The solution architecture unfolds as follows:

1. Data Collection and Preparation
2. Model Building with Transfer Learning using VGG19 architecture
3. Training Phase
4. Dog Breed Predictions
5. Practical Applications

In conclusion, our solution architecture leverages Transfer Learning and the VGG19 architecture to address the intricate task of dog breed identification. By using a comprehensive dataset and deep learning techniques, we can accurately classify dog breeds, ultimately benefiting veterinarians, dog owners, and various dog-related services while contributing to scientific research in canine genetics and phenotypic traits.

Solution Architecture Diagram: