DATE	28-02-2026
TEAM ID	LTVIP2026TMIDS90703
PROJECT NAME	Dog breed identification using transfer learning
MAXIMUM MARKS	5 MARKS

4.3 - Solution Architecture

The Solution Architecture of the Dog Breed Identification using Transfer Learning project defines the overall structural design of the system, describing how different components interact to deliver accurate breed predictions. The architecture follows a modular and layered approach, ensuring scalability, maintainability, and efficient performance.

At a high level, the system architecture consists of four primary layers: the Presentation Layer, Application Layer, Model Layer, and Data Layer. Each layer performs a specific function while interacting seamlessly with the others to ensure smooth system operation.

The Presentation Layer represents the user interface of the system. This layer is developed using the Flask web framework and is responsible for handling user interactions. Through a web page, users can upload an image of a dog for breed identification. The interface is designed to be simple and intuitive, allowing users to interact with the system without technical knowledge. Once the image is uploaded, it is sent to the backend server for further processing.

In conclusion, the solution architecture is designed to integrate deep learning capabilities with a web-based application framework effectively. It ensures high accuracy through transfer learning, smooth data handling through preprocessing modules, and user accessibility through a web interface.