

Dog breed identification using transfer learning

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TEAM ID	LTVIP2026TMIDS90703
PROJECT NAME	Dog breed identification using transfer learning
MAXIMUM MARKS	3 MARKS

3.4 - Technology Stack

In the Requirement Analysis phase, defining the technology stack is essential to ensure that the proposed solution is technically feasible, scalable, and efficient. The technology stack for the Dog Breed Identification using Transfer Learning project consists of programming languages, frameworks, libraries, development tools, and deployment components that collectively support model development, training, and web integration.

The primary programming language used in this project is Python. Python is widely preferred in machine learning and deep learning applications due to its simplicity, readability, and extensive ecosystem of libraries. Its rich set of scientific and AI-related packages enables efficient implementation of complex algorithms with minimal code complexity.

For deep learning model development, TensorFlow is utilized as the core framework. TensorFlow provides a powerful and flexible platform for building and training neural networks. It supports large-scale numerical computations and GPU acceleration, which significantly improves model training performance. On top of TensorFlow, Keras is used as a high-level API to simplify the process of designing and training Convolutional Neural Networks (CNNs). Keras enables easy implementation .