

## Dog breed identification using transfer learning

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MAXIMUM MARKS	3 MARKS

### 3.3 - Data Flow Diagram

In the Requirement Analysis phase, the Data Flow Diagram (DFD) is used to represent the logical flow of data within the Dog Breed Identification system. The DFD illustrates how input data moves through different processes, how it is transformed, and how the final output is generated. It provides a clear understanding of system functionality without focusing on implementation details.

At a high level (Level 0 – Context Diagram), the system consists of one primary external entity, which is the user. The user interacts with the system by uploading an image of a dog. The system processes the image using a trained deep learning model and returns the predicted dog breed as the output. The main data flow begins with the image input from the user and ends with the breed prediction result displayed on the user interface.

In Level 1 DFD, the system is divided into multiple processes to represent internal operations. The first process is Image Upload and Validation. In this stage, the user uploads an image through the web interface. The system checks whether the file format is valid and ensures that the image is suitable for processing. If validation fails, an error message is returned; otherwise, the image proceeds to the next stage.