

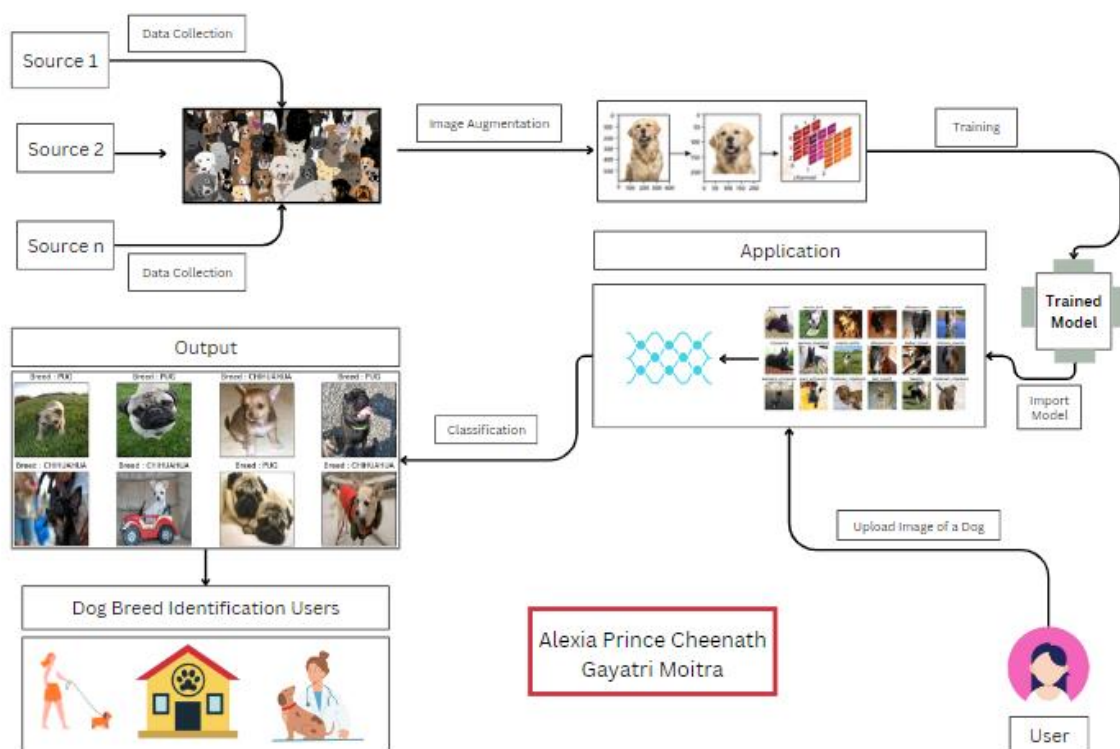
## Project Design Phase-II

### Data Flow Diagram & User Stories

Date	08 November 2023
Team ID	Team-592393
Project Name	Dog Breed Identification using Transfer Learning
Maximum Marks	4

#### Data Flow Diagrams:

A Data Flow Diagram (DFD) is a traditional visual representation of the information flows within a system. A neat and clear DFD can depict the right amount of the system requirement graphically. It shows how data enters and leaves the system, what changes the information, and where data is stored.



## User Stories

User Type	Functional Requirement	User Story Number	User Story/Task	Acceptance Criteria	Priority	Release
Vets, Dog Owners, Animal Shelter and Rescues, Pet Adoption Agencies, Researchers, Dog Shows and Competition, Mobile App Users and General Public	Project Setup and Infrastructure	USN-1	Set up the development environment with the necessary tools and frameworks to initiate the dog breed classification project.	Successfully configured environment with required tools and frameworks.	High	Sprint 1
	Development Environment	USN-2	Gather a diverse dataset of images containing various dog breeds for training the machine learning model.	Collected a diverse dataset of images representing multiple dog breeds	High	Sprint 1
	Data Collection	USN-3	Preprocess the collected dataset by resizing images, normalizing pixel values, and dividing it into training and validation sets.	Preprocessed dataset with resized images and normalized pixel values; split into training and validation sets.	High	Sprint 2
	Data Preprocessing	USN-4	Using VGG19 Transfer Learning architecture for the model.	Selected a Transfer Learning model that is suitable.	High	Sprint 2
	Model Development	USN-5	Train the selected machine learning model using the preprocessed dataset and monitor its performance on the validation set.	Trained model and assessed performance on validation set.	High	Sprint 3
	Training	USN-6	Implement data augmentation techniques (e.g., rotation, flipping) to enhance the model's accuracy and robustness.	Applied augmentation techniques to improve model performance.	Medium	Sprint 3
	Model deployment and Integration	USN-7	Deploy the trained machine learning model as an API or web service for dog breed classification. Integrate the model's API into a user-friendly web interface.	Deployed model as an accessible API and integrated it into a user-friendly web interface.	Medium	Sprint 4

	Testing and Quality Assurance	USN-8	Conduct comprehensive testing of the model and web interface, identifying and addressing any issues or bugs. Optimize the model based on user feedback and testing results.	Thoroughly tested model and web interface, optimized model performance based on feedback.	Medium	Sprint 5
--	-------------------------------	-------	---	---	--------	----------