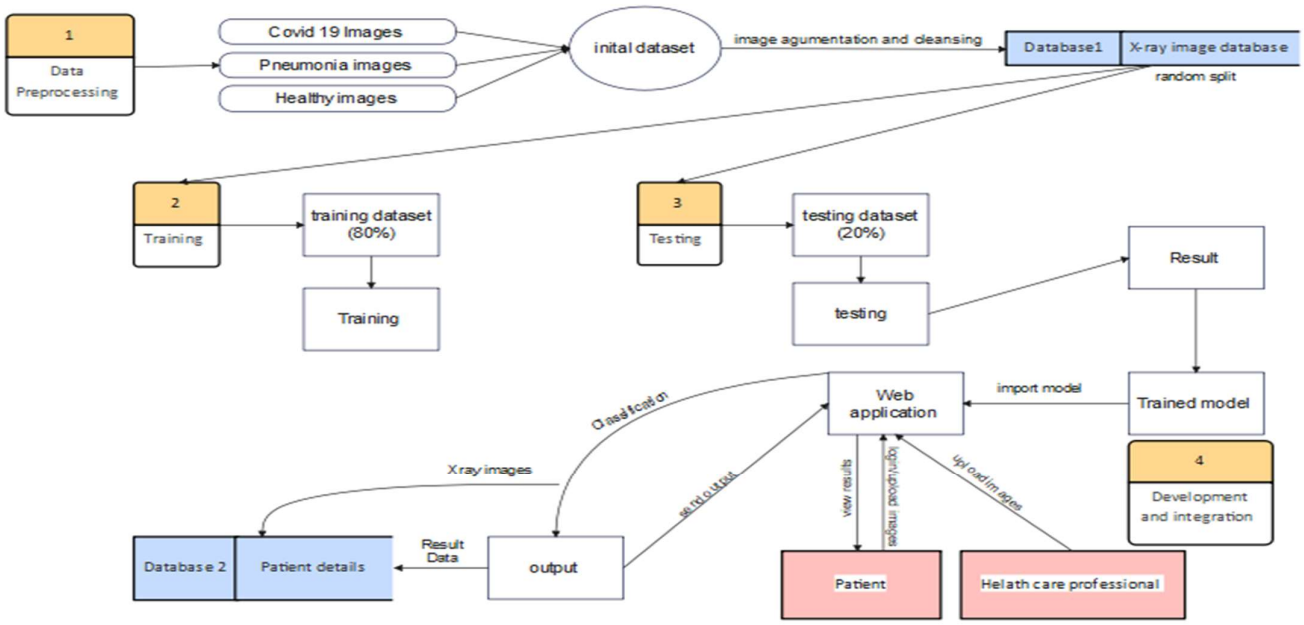
Project Design Phase-II
Data Flow Diagram & User Stories

Date	23-10-2023
Team ID	Team-593208
Project Name	Detecting Covid-19 From Chest X-Rays Using Deep Learning Techniques
Maximum Marks	4 Marks

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 (Epic)	User Story Number	User Story / Task	Acceptance criteria	Priority	Release
Radiologists	Project setup & Infrastructure	USN-1	Set up the development environment with necessary tools and frameworks for COVID-19 detection from X- ray images.	Successfully configured development environment with required tools and frameworks.	High	Sprint 1
Healthcare Providers	Data collection	USN-2	Gather a diverse dataset of X-ray images containing COVID-19 and non-COVID-19 cases for training the machine learning model.	Collected a diverse dataset of X-ray images with appropriate labels.	High	Sprint 1
Medical Researchers	Data preprocessing	USN-3	Preprocess the collected X-ray dataset, including resizing images and normalizing pixel values, and split it into training and validation sets	Preprocessed dataset ready for training with appropriate data splits.	High	Sprint 2
Data Scientists	Model development	USN-4	Develop and fine- tune a machine learning model for COVID-19 detection from X- ray images using the preprocessed dataset.	Trained machine learning model with acceptable accuracy.	High	Sprint 2
Hospital Administrators	Model Integration	USN-5	Integrate the trained model into the hospital's radiology software for seamless X-ray analysis.	Successfully integrated the model into the radiology software.	High	Sprint 3
AI Developers	Model deployment & Integration	USN-6	Deploy the machine learning model as an API or web service to make it accessible for COVID-19 detection. Integrate the model's API into a user-friendly web interface for radiologists to upload X-ray images and receive results.	The model is Medium deployed as an API, and integration into the web interface is complete.	mediu m	Sprint 3
Quality Assurance	Testing & quality assurance	USN-7	Conduct thorough testing of the model and web interface to identify and report any issues or bugs. Optimize model	Web application is functional, and the model performs with high accuracy	mediu m	Sprint 4
	Scaling and Accessibility	USN-8	Ensure the model's scalability and accessibility for mass COVID-19 detection efforts in public health initiatives.	Model is scalable and accessible for use in public health settings	mediu m	Sprint 5