

**Project Design Phase-II**  
**Data Flow Diagram & User Stories**

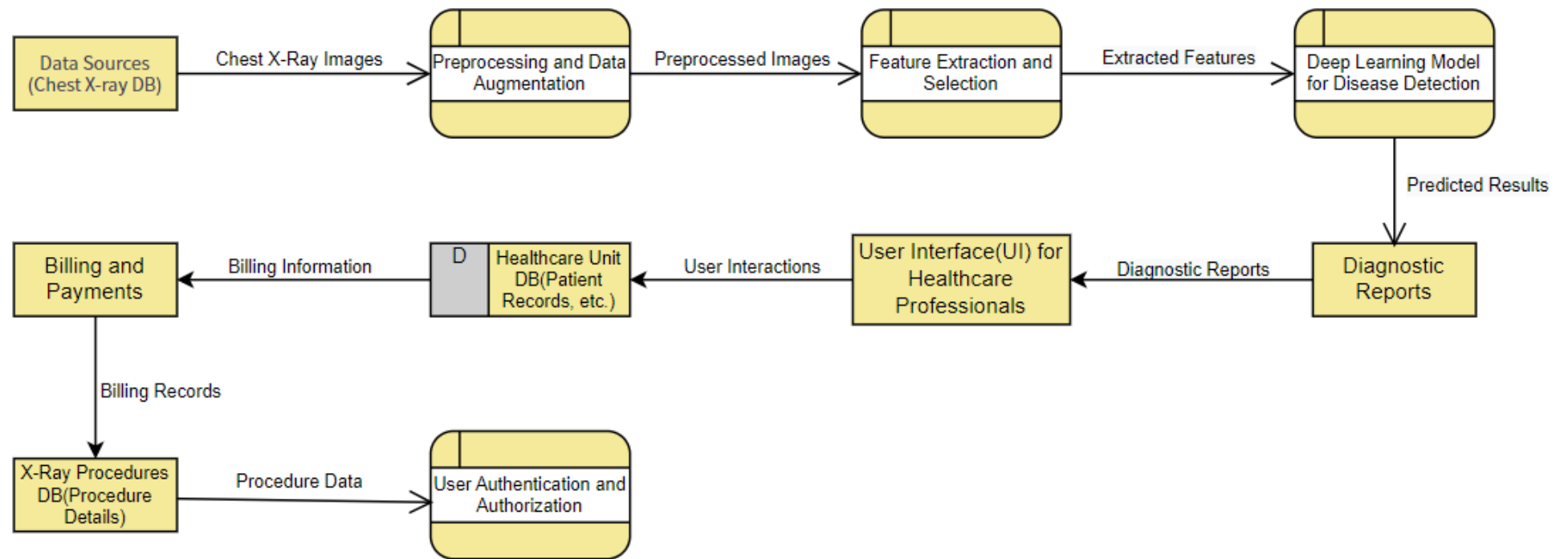
Date	03 October 2022
Team ID	Team-592761
Project Name	Detection of Covid -19 from chest X-rays using Deep learning.
Maximum Marks	4 Marks

**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.

**DFD Components:**

- 1) **Data Sources:** Chest X-ray images are collected from various sources, such as a database of X-ray images.
- 2) **Preprocessing & Data Augmentation:** The input X-ray images go through preprocessing and data augmentation to enhance the data quality and prepare it for feature extraction.
- 3) **Feature Extraction and Selection:** This step involves extracting relevant features from preprocessed images and selecting the most informative ones for the deep learning model.
- 4) **Deep Learning Model for Disease Detection:** The core of the system, where the deep learning model uses the extracted features to detect and diagnose diseases. It also autonomously updates its learning.
- 5) **Diagnostic Reports:** The model generates diagnostic reports based on its predictions and stores them for further use.
- 6) **User Interface (UI) for Healthcare Professionals:** The interface through which healthcare professionals interact with the system, upload images, and access diagnostic reports.
- 7) **Healthcare Unit Database:** A database where patient records and diagnostic reports are stored, allowing healthcare professionals to access historical data.



## User Stories

Use the below template to list all the user stories for the product.

User Type	Functional Requirement (Epic)	User Story Number	User Story / Task	Acceptance criteria	Priority	Release
Healthcare Professional	Disease Diagnosis	USN-1	As a healthcare professional, I can upload chest X-ray images to the system for disease diagnosis	The system allows me to upload X-ray images and provides diagnostic reports for the uploaded images	High	Sprint-1
	Access Diagnostic Reports	USN-2	As a healthcare professional, I can access diagnostic reports generated by the system	I can view and access diagnostic reports, including disease diagnosis results, patient information, and dates of diagnosis	High	Sprint-1
Billing Department	Billing and Payments	USN-3	As a billing department staff member, I can generate invoices for diagnostic services and process payments.	The billing department can generate invoices for diagnostic services, including detailed service information and process payments through various methods	High	Sprint-1

System Administrator	User Management	USN-4	As a system administrator, I can manage user accounts and their access to the system.	The system administrator can manage user accounts, assign roles and permissions, and enforce security and access controls	High	Sprint-1
Healthcare Professional	X-Ray Procedure Information	USN-5	As a healthcare professional, I want access to information about X-ray procedures available in the system.	Healthcare professionals can access information about X-ray procedures, including descriptions, costs, and billing codes	Medium	Sprint-1
System Administrator	User Authentication and Authorization	USN-6	As a system administrator, I want to ensure secure user authentication and authorization for system access.	The system administrator can configure secure user authentication methods, define user roles and access rights, and enforce strong password policies.	High	Sprint-1