

Project Design Phase-II
Data Flow Diagram & User Stories

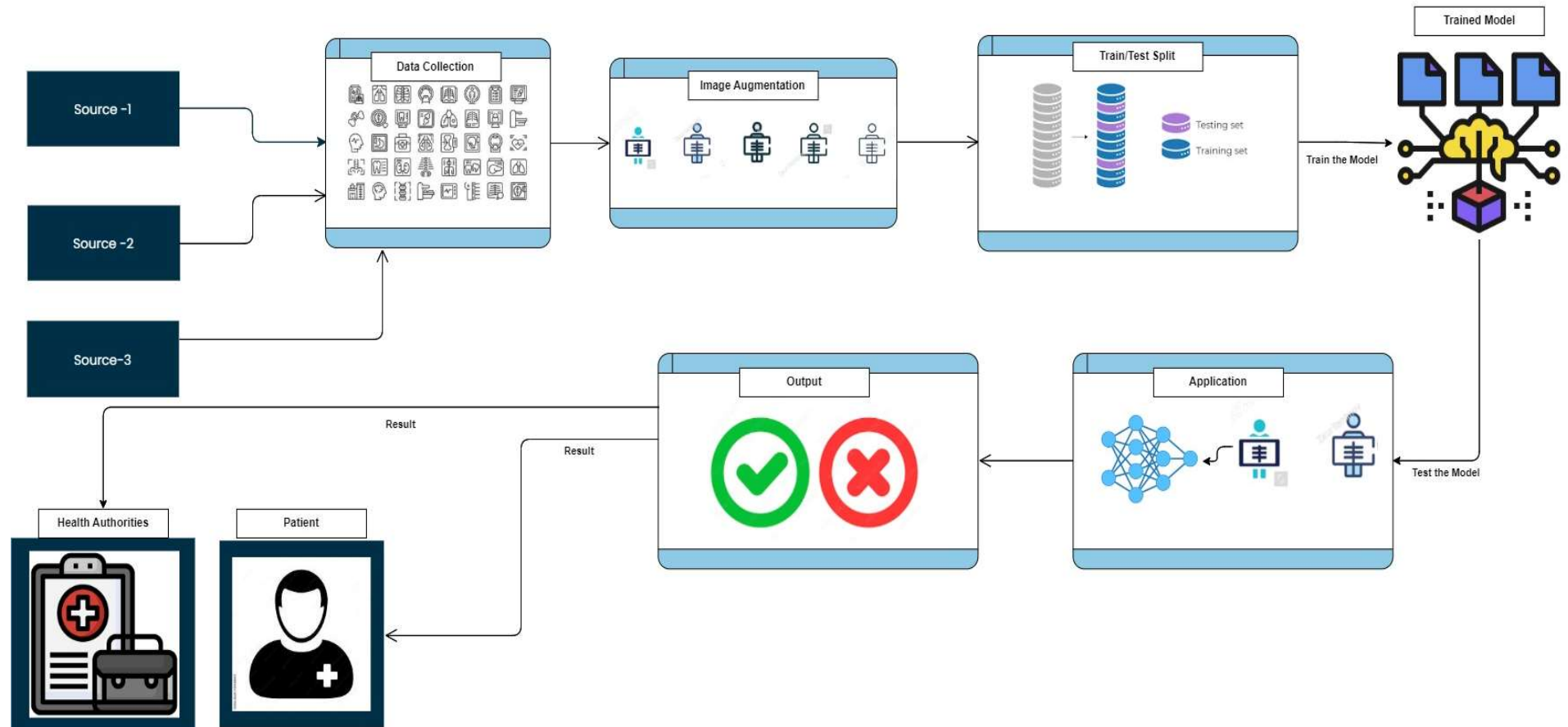
Date	23 October 2023
Team ID	Team-592616
Project Name	Detecting Covid-19 from Chest X-Rays using Deep Learning Techniques
Maximum Marks	4 Marks

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.

- DFDs consist of processes, data stores, data flows, and external entities.
- Processes represent actions or transformations.
- Data stores are repositories for data.
- Data flows illustrate the movement of data.
- External entities interact with the system.
- Data flows depict the movement of data between stages in the system.
- They are labeled to describe the type of data being transmitted.

Dataflow Diagram:



User Stories

USER TYPE	FUNCTIONAL REQUIREMENT (EPIC)	USER STORY NUMBER	USER STORY/TASK	ACCEPTANCE CRITERIA	PRIORITY	RELEASE
Radiologist	AI-Assisted Radiological Diagnosis	USN - 1	As a radiologist, I need the system to provide rapid COVID-19 detection from chest X-rays with high accuracy and reliability.	The AI should be highly accurate in identifying Covid-19 cases from X-ray images. Reports should be generated quickly for radiologists to review.	High	Sprint 1
Service Engineer	Infrastructure and Maintenance	USN - 2	As a service engineer, I require access to the system's diagnostic capabilities to troubleshoot and maintain the equipment, ensuring it functions optimally and remains in good working order.	The system should be reliable, with minimal downtime. Regular maintenance should not disrupt user access.	High	Sprint 2
Healthcare Administrator	User Management and Data Security	USN - 3	As a healthcare administrator, I require real-time alerts and notifications for potential COVID-19 cases to ensure immediate patient care and isolation when necessary.	Control who can access patient data. Ensure data security and regulatory compliance.	High	Sprint 3

Patient	Patient Reporting and Notifications	USN - 4	As a patient, I want a user-friendly interface to easily upload my chest X-ray image for a quick assessment, with a focus on usability and accessibility.	Patients should easily upload X-ray images. Results should be shared with patients and healthcare providers within 24 hours.	High	Sprint 1
Machine Learning Engineer	Model Training and Optimization	USN - 5	As a machine learning engineer, I need continuous access to a diverse chest X-ray dataset for model training and improvement, with high priority on data quality and quantity.	Train the model with a large dataset and regularly improve its accuracy.	High	Sprint 2
IT Support	Technical Support and Troubleshooting	USN – 6	As IT support, I need a user-friendly admin interface for system maintenance and updates, with a focus on administrative ease and efficiency.	Provide timely technical support to users.	Medium	Sprint 4
Researcher	Data Analysis and Research Tools	USN - 7	As a researcher, I would like access to de-identified data for medical research purposes, with a medium priority on research access.	Researchers should access data and use it for their studies.	Medium	Sprint 4

Data Compliance Officer	Data Compliance and Governance	USN - 8	As a data compliance officer, I require secure storage and management of medical data to protect patient privacy, with a medium priority on data security and privacy.	Keep data secure and compliant with regulations.	Medium	Sprint 5
Software Developer	Codebase Refactoring and Technical Debt Reduction	USN - 9	As a software developer, I want to refactor and optimize the existing codebase of the Covid-19 detection model to improve its efficiency and maintainability, even though it doesn't have an immediate impact on patient care.	Refactor the code to make it easier to manage and reduce bugs.	Low	Sprint 5
Quality Assurance Tester	Regression Testing and Quality Assurance	USN - 10	As a quality assurance tester, I want to perform regression testing on the Covid-19 detection system after minor updates, such as bug fixes or UI improvements, to ensure the overall stability of the application.	Test the system after each update, focusing on high and medium priority issues.	Low	Sprint 5