

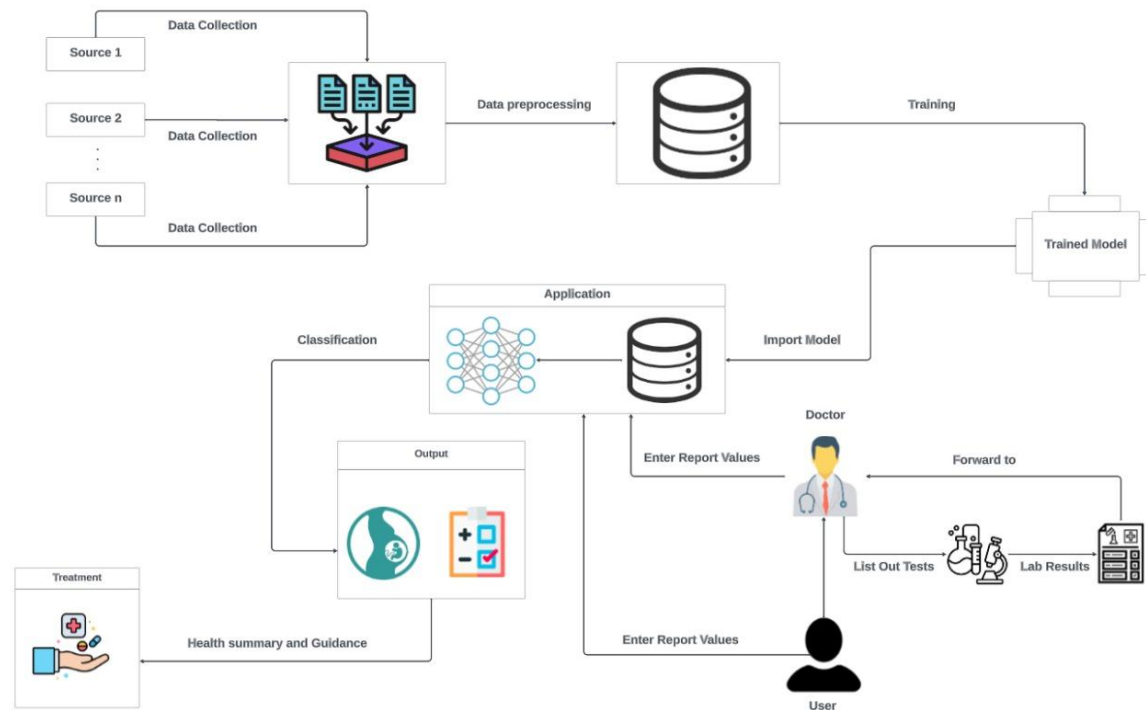
Project Design Phase-II Data Flow Diagram & User Stories

Date	5 November 2023
Team ID	Team-592006
Project Name	FetalAI: USING MACHINE LEARNING TO PREDICT AND MONITOR FETAL HEALTH
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.

1. User configures credentials for Fetal health prediction service and starts the app.
2. User sorts out data values from lab tests to process and load .
3. Flask extracts the required measures from the web app.
4. The values are passed to our model to predict the featal health condition and provide some health tips based on it and if any treatments are required.
5. The health report is displayed and baby movements, heartbeat, decelerations etc are visualized using seaborn library.



User Stories

User Type	Functional Requirement (Epic)	User Story Number	User Story / Task	Acceptance criteria	Priority	Release
Expecting parent	User Registration	USN-1	I can register for the fetal health prediction application by providing my name, email, and creating a secure password.	I can access my account/dashboard	High	Sprint 1
Government Hospitals and Local Laboratories	User Registration	USN-2	I can register using my professional credentials and affiliation details to access advanced features for fetal health analysis.	I can access my account	High	Sprint 1
Research collaborator	User Registration	USN-3	I can register with my institution's email to contribute ultrasound data for research purposes, after approval from the system administrator.	I can access my account/dashboard	medium	Sprint 2
Carrying woman	User profile	USN-4	I can complete my profile by adding my partner's information and expected due date to personalize the fetal health predictions.	Create profile	medium	Sprint 2
Healthcare provider	User profile	USN-5	I can update my profile to include my specialization and certifications for accurate identification within the application.	Create/update profile	medium	Sprint 2
Carrying woman	Fetal health prediction	USN-6	I can enter test results in the application for fetal health analysis.	I can know health analysis	high	Sprint 1
Healthcare professional	Fetal health prediction	USN-7	I can input detailed ultrasound measurements and parameters to obtain in-depth fetal health predictions for my patients.	I can gain in-depth vital information	high	Sprint 2
father	Fetal health prediction	USN-8	I can view the fetal health predictions, including vital statistics and potential risks, in an easy-to-understand format.	I can easily understand the statistics, risks through the format.	Medium	Sprint 1
Healthcare provider	Fetal health prediction	USN-9	I can receive real-time notifications for high-risk predictions, enabling immediate intervention and consultation with specialists.	I can stay relieved.	High	Sprint 1
parents	health care	USN-10	I can access educational resources and articles about fetal health and development to stay informed about my baby's progress.	I can take care of my baby much better.	high	Sprint 2

mother	healthcare	USN-11	I can set up personalized notifications for appointment reminders, fetal development updates, and health tips.	I can take much more care.	High	Sprint 1
Healthcare professional	healthcare	USN-12	I can download comprehensive health reports in PDF format for my patients, including graphical representations of the fetal health data.	I can keep record of previous test results and compare with current ones for checking improvement.	low	Sprint 3
mother	User support	USN-13	I can contact customer support via chat or email to seek assistance with uploading ultrasound images, understanding predictions, or any other issues.	I can get guidance to use such a vital app.	high	Sprint 1
Registered user	User support	USN-14	I can access a frequently asked questions (FAQ) section to find quick solutions to common queries about using the application.	I can know using app much better and get to explore well .	high	Sprint 1
Developer	model deployment & Integration	USN-15	I can deploy the trained machine learning model as an API or service to enable integration with existing healthcare systems for continuous fetal health monitoring.	we could check the scalability	medium	Sprint 1
Tester	Testing & quality assurance	USN-16	I can conduct extensive testing and validation of the machine learning model's predictions and the user interface's functionality to ensure accuracy and reliability.	we could create web application	medium	Sprint 1

