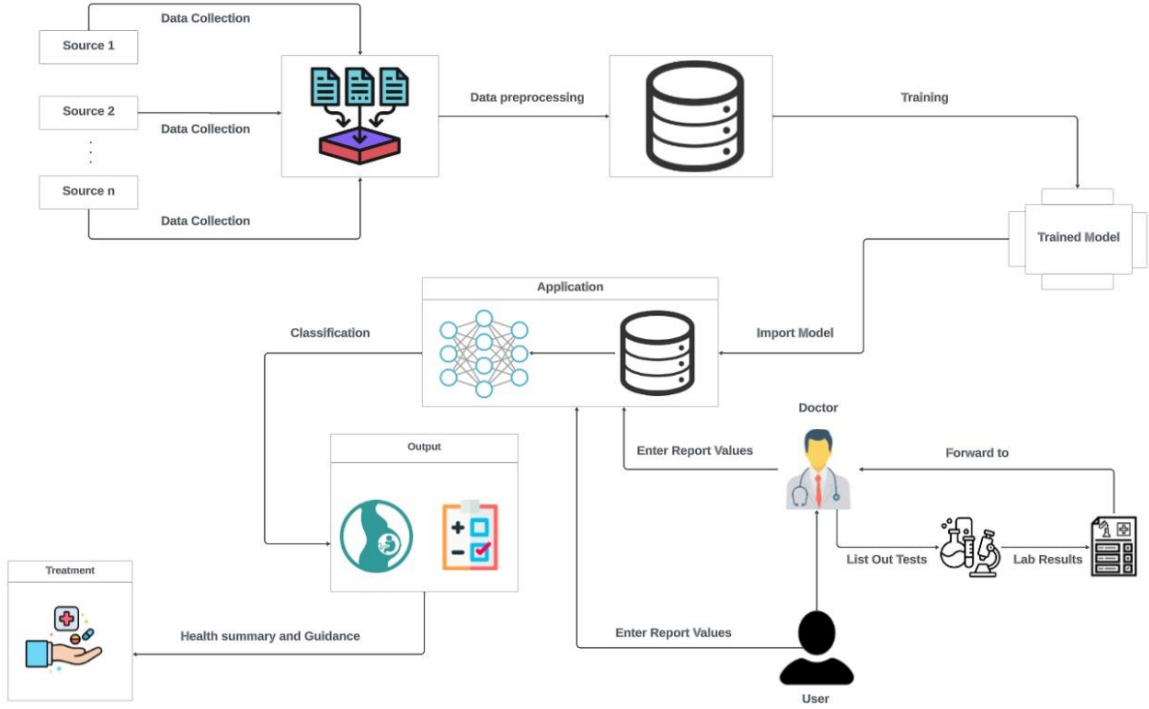
Project Design Phase-II
Data Flow Diagram & User Stories

Date	4 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
Hospitals	Project setup & Infrastructure	USN-1	Set up the development environment with the required tools and frameworks to start the Fetal Health Monitoring Project.	successfully configured with all necessary tools and frameworks	High	Sprint 1
Government Hospitals and Local Laboratories	development environment	USN-2	Collect a diverse dataset of fetal health records and associated maternal health data for training the deep learning model.	Gathered a diverse dataset of fetal health records	High	Sprint 1
Carrying Women	Data collection	USN-3	Preprocess the collected dataset by handling missing values, normalizing features, and ensuring data quality before splitting it into training and validation sets.	preprocessed the dataset	High	Sprint 2
Researchers and Academics	data preprocessing	USN-4	Explore various deep learning algorithms (e.g., CNNs) and models suitable for predicting fetal health based on the preprocessed dataset.	we could explore various DL models	High	Sprint 2
Non-Governmental Organizations (NGOs)	model development	USN-5	train the selected deep learning model using the preprocessed dataset and monitor its performance on the validation set.	we could do validation	High	Sprint 3
Educational Institutions	Training	USN-6	Implement anomaly detection techniques to identify potential risks or abnormalities in fetal health monitoring data.	we could do testing	medium	Sprint 3
	model deployment & Integration	USN-7	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 4
	Testing & quality assurance	USN-8	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 5