Project Design Phase - II

Technology Stack (Architecture & Stack)

Date	16 November 2023
Team ID	Team - 591794
Project Name	USING MACHINE LEARNING TO PREDICT AND MONITOR FETAL HEALTH.
Maximum Marks	4 Marks

Technical Architecture :

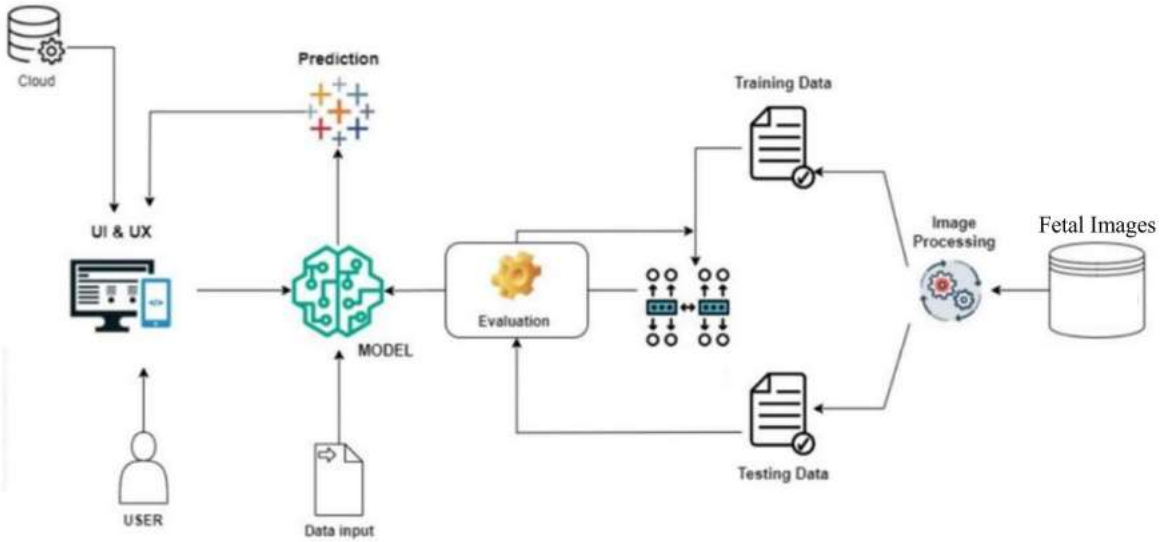

Table-1 Components & Technologies

SNO	Component	Description	Technology
1	User Interface	Web UI	HTML, CSS, JavaScript
2	Application Logic-1	Data Preprocessing	Python, Numpy
3	Application Logic-2	Creating ML model	Necessary Python Libraries
4	Application Logic-3	Web application	Flask
5	Machine Learning Model	ML model using Random Forest	Machine learning algorithm (Random Forest) from scikit learn
6	Infrastructure (Server / Cloud)	Application Deployment on Cloud Server	AWS EC2

Table-2 Application Characteristics

SNO	Characteristics	Description	Technology
1	Open-Source Frameworks	Flask	Technology of Open Source framework

2	Security Implementations	CSRF Protection, Secure Flag For Cookies	SHA-256, Encryptions, IAM Controls, OWASP etc.
3	Scalable Architecture	3 – tier, Micro-services	Micro Web Application by Flask.
4	Availability	U se of load balancers (ALB), distributed servers etc,	Application Load balancer Werkzeug,Jinja2,Sinatra Ruby Framework
5	Performance	Orm-Agnostic, Web Framework,Wsgi 1.0 Compliant, Http Request Handling Functionality High Flexibility	SQLAlchemy,Extensions, Werkzeug,Jinja2,Sinatra Ruby Framework