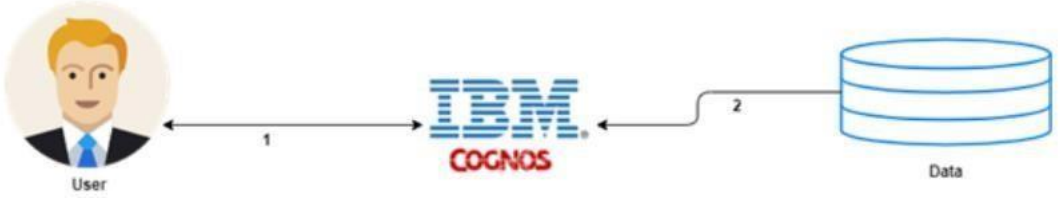
Project Design Phase-II
Technology Architecture

Date	16 October 2022
Team ID	PNT2022TMID07365
Project Name	Analytics for Hospital's Health-Care Data
Maximum Marks	4 Marks

Technical Architecture:



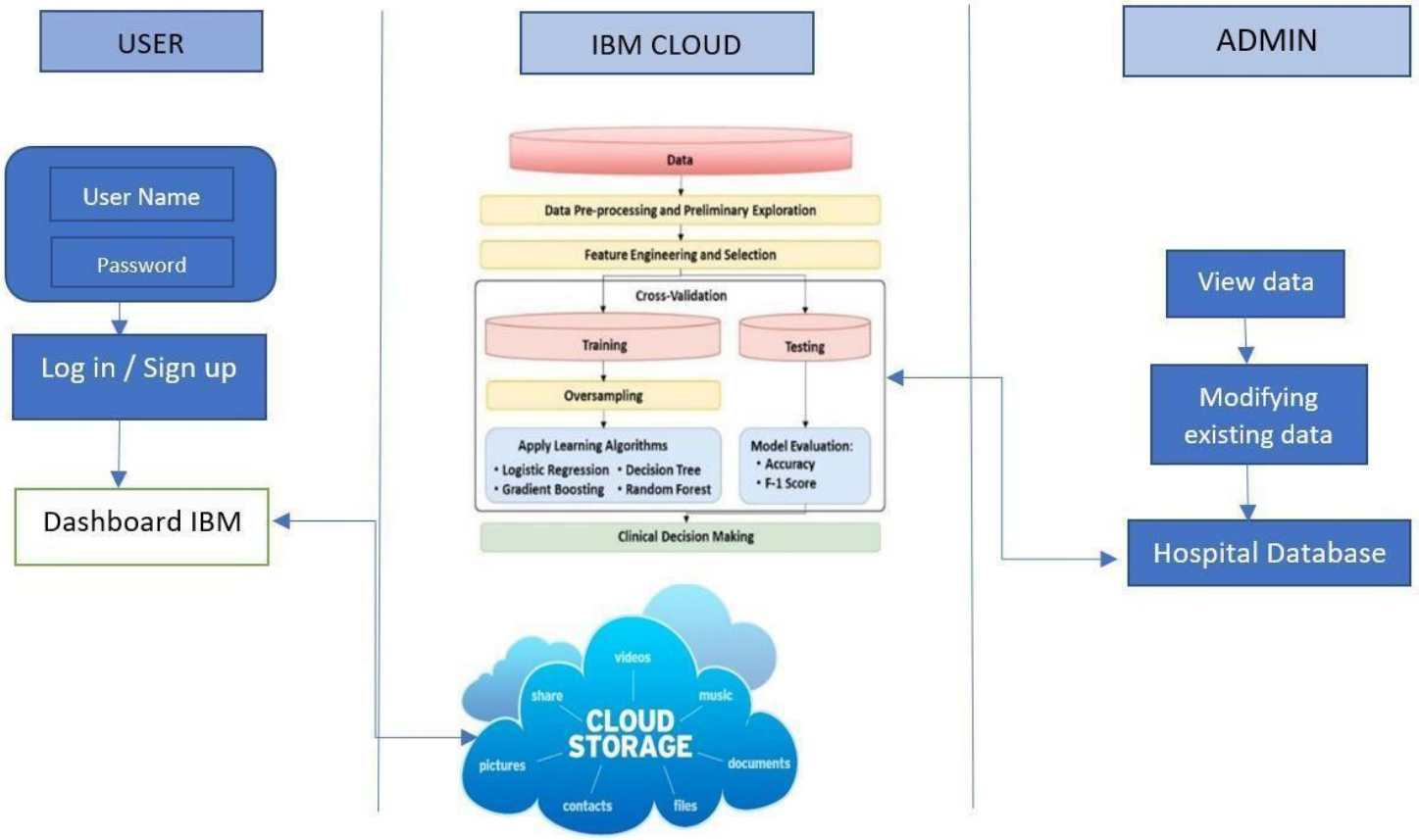

USER
IBM CLOUD
ADMIN
User Name
Password
Log in / Sign up
Dashboard IBM
Data
Data Pre-processing and Preliminary Exploration
Feature Engineering and Selection
Cross-Validation
Training
Testing
Oversampling
Apply Learning Algorithms
• Logistic Regression • Decision Tree
• Gradient Boosting • Random Forest
Model Evaluation:
• Accuracy
• F-1 Score
Clinical Decision Making
videos
share
music
CLOUD STORAGE
pictures
documents
contacts
files
View data
Modifying existing data
Hospital Database

Table1: Components & Technologies:

S. No	Component	Description	Technology
1.	User Interface	Connecting user to the application :Web UI, Mobile App, Chatbot etc.	HTML, CSS, JavaScript / Angular Js / React Js etc…
2.	Application Logic-1	Logging in as a patient / user in the application	Python
3.	Application Logic-2	Logging in as an admin in the application	IBM Watson Assistant
5.	Database	It contains all the data needed for data analysis.	MySQL, NoSQL, etc.
6.	Cloud Database	IBM Watson cloud is used for storage, Cloud	IBM DB2, IBM Cloud ant etc.
7.	External API-1	Purpose of External API used in the application	Kagggle API
8.	Algorithm	Purpose of Machine Learning Model	Regression Model, etc.
9.	Infrastructure (Server / Cloud)	Application Deployment on Local System / Cloud Local Server Configuration, Cloud Server Configuration	Local, Cloud Foundry, Kubernetes, etc.

Table-2: Application Characteristics:

S. No	Characteristics	Description	Technology
1.	Open-Source Frameworks	List the open-source frameworks used	Python
2.	Security Implementations	Provide security access and control.	Encryption.
3.	Scalable Architecture	Describe the scalability of architecture.	Can supports higher workloads
4.	Availability	Justify the availability of application (e.g. use of load balancers, distributed servers etc.)	Highly available
5.	Performance	Design consideration for the performance of the application	It performs good uses various tools and ideas in a scientific manner to meet the desired outcomes