

Project Design Phase-II
Technology Stack (Architecture & Stack)

Date	03 November 2022
Team ID	PNT2022TMID12919
Project Name	Project - Statistical Machine Learning Approaches to Liver Disease Prediction
Maximum Marks	4 Marks

Technical Architecture:

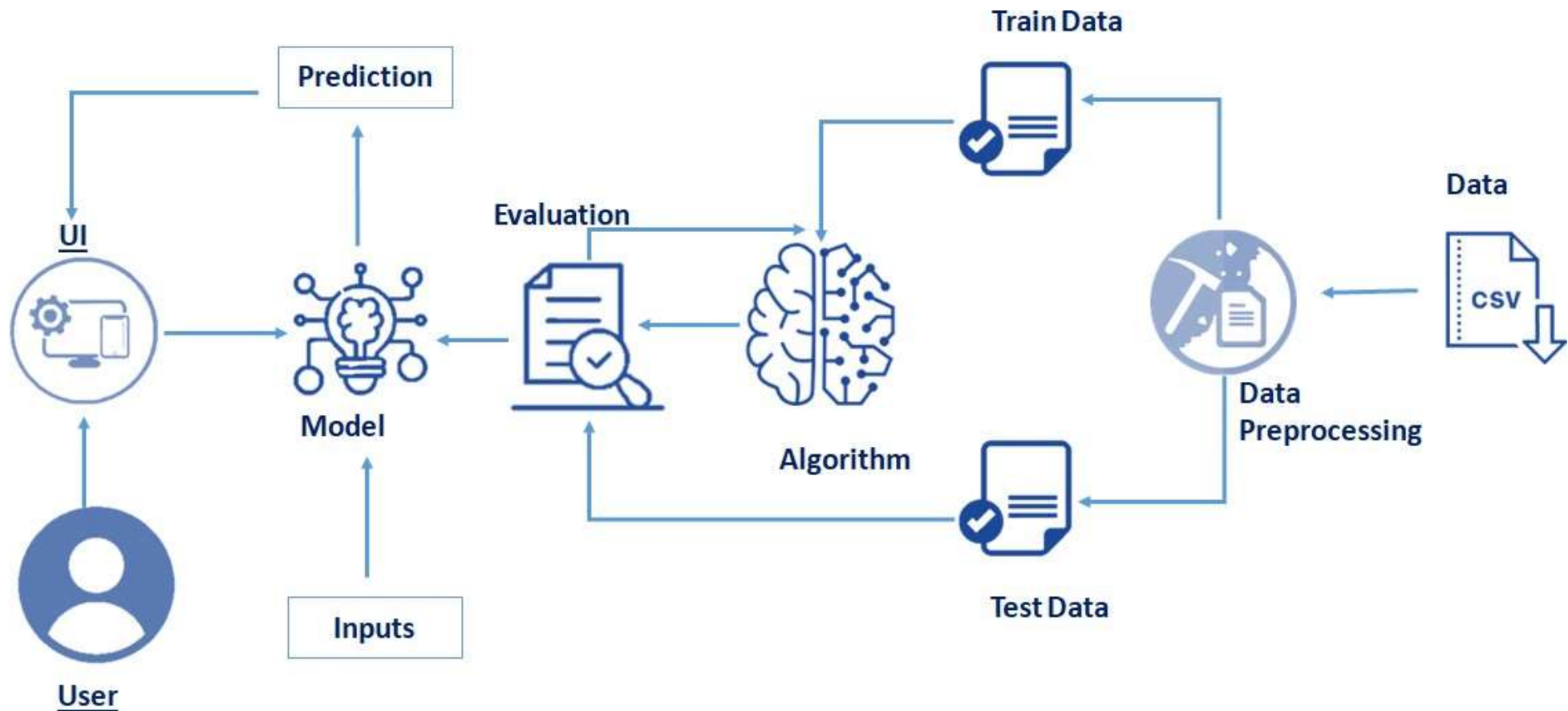


Table-1 : Components & Technologies:

S.No	Component	Description	Technology
1.	User Interface	A Web page which gets user input and send it to the backend for predicting the given input data	HTML, CSS.
2.	Predicting Model	Model which takes user input and predict whether the person have liver disease or not	Python, Numpy, Pandas, Scikit-learn
3.	Web Server	A web server which serves static HTML user interface files and uses Predicting ML model to process output and send back to the client	Python, Flask
4.	Machine Learning Model	The model used for classify whether the person have liver disease or not	Support Vector Machine Model
5.	Cloud Deployment	The ML model is bind with web server and deployed in to the IBM cloud	IBM cloud/AWS

Table-2: Application Characteristics:

S.No	Characteristics	Description	Technology
1.	Open-Source Frameworks	There are several opensource frameworks used for data preprocessing , data analysis , Model building , pickling and web servers	Numpy ,Pandas ,Seaborn ,Scikit-learn ,Pickle ,Flask
2.	Security Implementations	Since no user data is stored in the server , There is no security issues in the application side	-
3.	Scalable Architecture	It is a monolithic architecture and , if needed the model which is used to predict can be developed separately as a microservice	Microservices using Docker and Kubernetes
4.	Availability	If the load increases a load balancer can be used to handle the huge request	Nginx Server, Load Balancer
5.	Performance	The performance is still good and has no need the interference of external CDNs, It can able to handle adequate amount of network requests	-