PROJECT DESIGN PHASE-I

SOLUTION ARCHITECTURE

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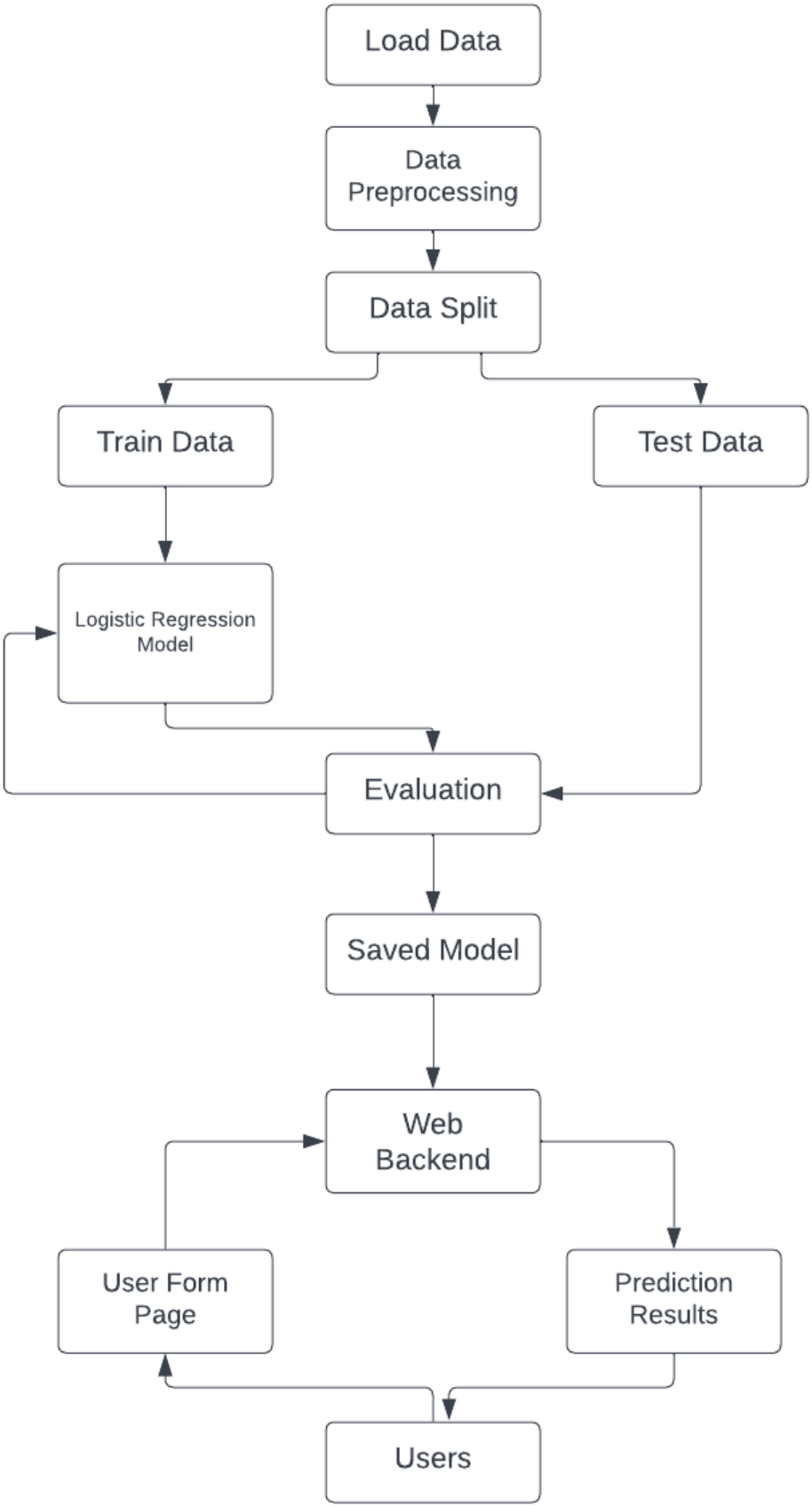
Team Lead	Febia Thomas
Team Members	Aryan TSB Girish Kumar S Madhav Hari V
Project Name	Early Detection of Chronic Kidney Disease using Machine Learning

PROBLEM STATEMENT

Chronic Kidney Disease (CKD) is a major medical problem and can be cured if treated in the early stages. Usually, people are not aware that medical tests we take for different purposes could contain valuable information concerning kidney diseases. Consequently, attributes of various medical tests are investigated to distinguish which attributes may contain helpful information about the disease. The information says that it helps us to measure the severity of the problem and we make use of such information to build a machine learning model that predicts Chronic Kidney Disease. CKD is more common in people aged 65 years or older (38%) than in people aged 45–64 years (12%) or 18–44 years (6%). CKD is slightly more common in women (14%) than men (12%).

SOLUTION ARCHITECTURE

Data is collected and made in a common csv format.This data is then loaded, preprocessed inorder to remove null values, segregate the dependent and independent variables, encode the needed columns, create analysis maps, split the data into training and testing data, choose the model which can suit this problem, train the model with the training data, test the accuracy with the test data against predicted data and save the model to integrate it with a web app. A web app is built which renders a form for the user to enter the attributes.The saved model is loaded and the entered values are fed into the loaded model and the predicted results are returned to the user. The model is then deployed into the cloud for the web app to request from the deployed model.


Load Data
Data Preprocessing
Data Split
Train Data
Test Data
Logistic Regression Model
Evaluation
Saved Model
Web Backend
User Form Page
Prediction Results
Users