Low Level Design

Food Recommendation System

Written By	Bhavya M Shah
Document Version	0.1
Last Revised Date	08 – Aug-2022

Document Control

Change Record:

Version	Date	Author	Comments
0.1	08 – Aug-2022	Bhavya Shah	Introduction & Architecture defined
0.1	08 – Aug-2022	Bhavya Shah	Architecture & Architecture Description appended and updated
0.1	08 – Aug-2022	Bhavya Shah	Unit Test Cases defined and appended

Reviews:

Version	Date	Reviewer	Comments
0.1	08 – Aug-2022	Bhavya Shah	Document Content , Version Control and Unit Test Cases to be added

Approval Status:

Version	Review Date	Reviewed By	Approved By	Comments

Contents

1. Introduction

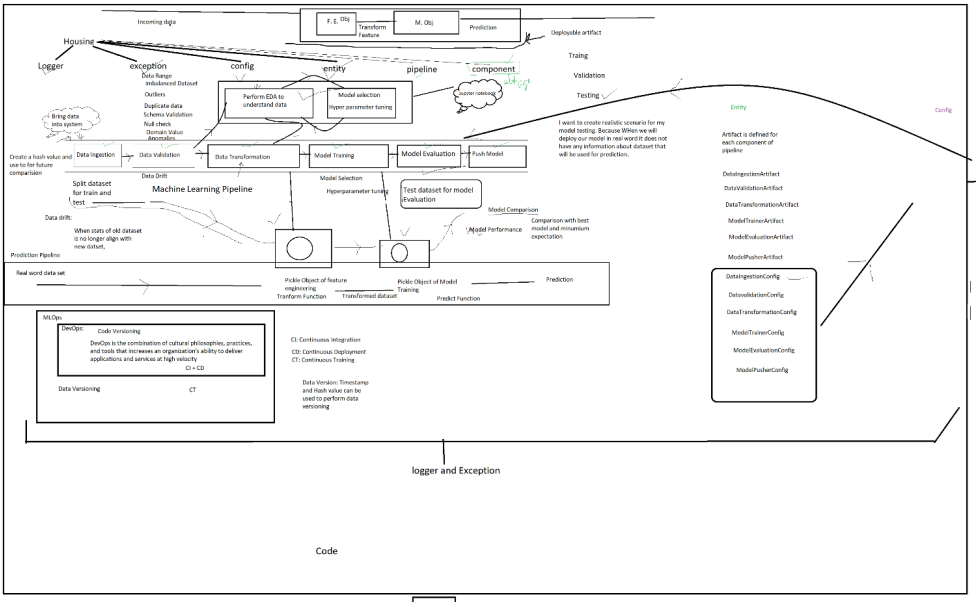
1.1. What is Low-Level design document?

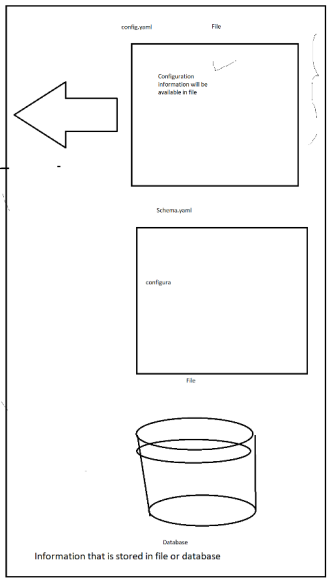
The goal of LLD or a low-level design document (LLDD) is to give the internal logical design of the actual program code for Food Recommendation System. LLD describes the class diagrams with the methods and relations between classes and program specs. It describes the modules so that the programmer can directly code the program from the document.

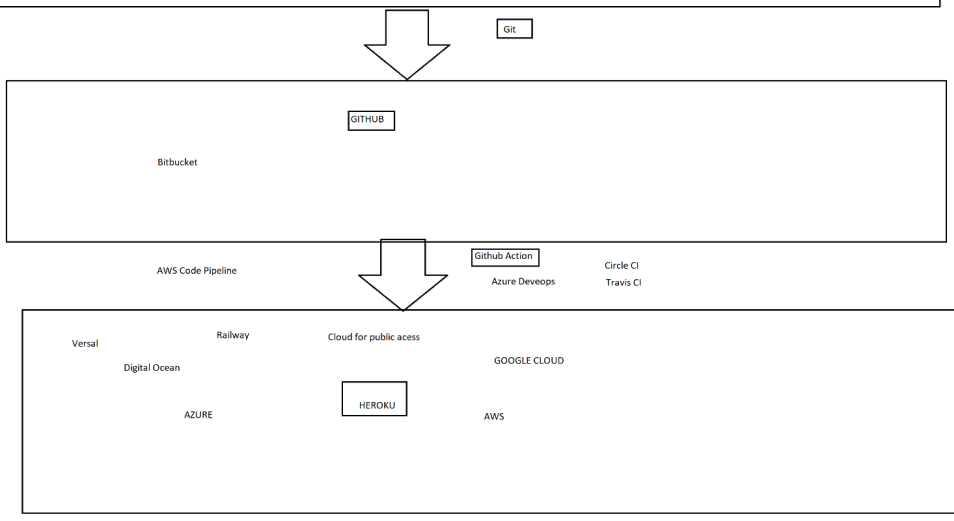
1.2. Scope

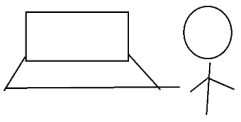
Low-level design (LLD) is a component-level design process that follows a step-by-step refinement process. This process can be used for designing data structures, required software architecture, source code and ultimately, performance algorithms. Overall, the data organization may be defined during requirement analysis and then refined during data design work

2. Architecture









3. Architecture Description

3.1. Data Collection

Load,summary statistics,information about dataset. Big Mart Store Sales dataset is the biggest publicly available dataset. This dataset contains 8523
data including 12 different columns.

3.2. ML Project

In order to generate more sales we need some more data.

3.3. Data cleansing

missing values removal

In the Transformation Process, we will convert our original dataset which is in JSON format to CSV Format.

3.4. EDA (Exploratory Data Analysis)

visualization , outlier removal

3.5. Data Pre-processing

Data Pre-processing steps Encoding , Correlation matrix.

3.6. Creation of train test and validation sets

Divide the data into train and test split

3.7. Model Creation

Divide the data into train and test split

3.8. Hyperparameter tuning

Grid Search Cv or randomized search cv

4. Unit Test Cases

Test Case Description	Pre-Requisite	Expected Result
Verify whether the Application URL is accessible to the user	1. Application URL should be defined	Application URL should be accessible to the user
Verify whether the Application loads completely for the user when the URL is accessed	1. Application URL is accessible 2. Application is deployed	The Application should load completely for the user when the URL is accessed
Verify whether user is able to see input fields on logging in	1. Application is accessible 2. User is signed up to the application 3. User is logged in to the application	User should be able to see input fields on logging in
Verify whether user is able to edit all input fields	1. Application is accessible	User should be able to edit all input fields
Verify whether user gets Submit button to submit the inputs	1. Application is accessible	User should get Submit button to submit the inputs
Verify whether user is presented with recommended results on clicking submit	1. Application is accessible	User should be presented with recommended results on clicking submit
Verify whether the recommended results are in accordance to the selections user made	1. Application is accessible	The recommended results should be in accordance to the selections user made
Verify whether user has options to filter the recommended results as well	1. Application is accessible	User should have options to filter the recommended results as well

Verify whether KPIs modify as per the user inputs for the user's health	1. Application is accessible	KPIs should modify as per the user inputs for the user's
Verify whether the KPIs indicate details of the suggested sales	1. Application is accessible	The KPIs should indicate details of the suggested sales