Low Level Design

Rental Bike Prediction

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| Document Version | 0.1 |

Document Control

**Change Record:**

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| --- | --- | --- | --- |
| Version | Date | Author | Comment |
| 0.1 | 15 -Jan-2023 | Sk Tufail Ahmed | LLD made |
|  |  |  |  |

**Reviews:**

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| Version | Date | Reviewer | Comment |
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**Approval Status:**

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| --- | --- | --- | --- | --- |
| Version | Review Date | Reviewed By | Approved By | Comment |
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Introduction

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.

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.

Diagram

Description automatically generatedArchitecture

Architecture Description

Data Ingestion

This is the process of getting data from where it stored (example: in the cloud) to our system and dividing it into original, train and test data.

Data Validation

This is stage where we check the distribution of the data that it matches the original data that the model was trained with. We also check for all the required columns and their data types that they match the original data or not.

Data Transformation

Here we transform our data i.e. Scaling, Normalizing or Converting categorical columns to numerical columns

Model Building

We build and train the model with the data we transformed. And save the model.

Model Evaluation

If there any existing model in use, then we compare it with our current model by using our test data and see which perform better.

Model Pusher

We push the better of two model to the model registry, if there exist a model else, we push the current model to the model registry.

API Building

As this is web app kind of development, we have to create API’s so that we can get data from the user and process it to make the prediction.

Prediction

Publishing the result from the data that the user gave.