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# LOW-LEVEL DESIGN

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Insurance Premium Prediction



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# DOCUMENT VERSION CONTROL

[illegible]

# 1.0 Introduction

## 1.1 What is Low-Level Design Document?

The goal of an LLD or Low-Level design document (LLDD) is to give the internal logical design of the actual program code. Low-Level design is created based on the High-Level design. 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 to design data structures, required software architecture, source code, and performance algorithms. Overall, the data organization may be defined during requirement analysis and then refined during data design work.

## 2.0 Architecture



## 3.0 Architecture Description

### 3.1 Data Description

The primary source of data for this project from Kaggle. The dataset is comprised of 1338 records with 6 attributes. The data is in a structured format and stored in a CSV file.

### 3.2 Exploratory Data Analysis

Exploring the data by visualizing the distribution of values in some columns of the dataset, and the relationships between expenses and other columns. Visualizing the

distribution of age, BMI (body mass index). Also checking the region wise have any differences in the expenses.

### 3.3 Data Pre-processing

If data is not suited to take place directly for the regression. Then, cleaning of dataset becomes important for using the data under various regression algorithms.

### 3.4 Model Building

After data pre-processing, we will split the dataset into a training and a validation sets. Then we will use the training set for building the best. model. The model will be trained on several algorithms. We will calculate RMSE and  $r^2$  scores for each model and select the model with the best score.

### 3.5 Data Validation

Here Data Validation will be done on the test set.

### 3.6 Deployment

We will be deploying the model to the Gradio platform.