iNeuron

Low Level Design

Campus Placement Prediction

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Document Control

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# 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
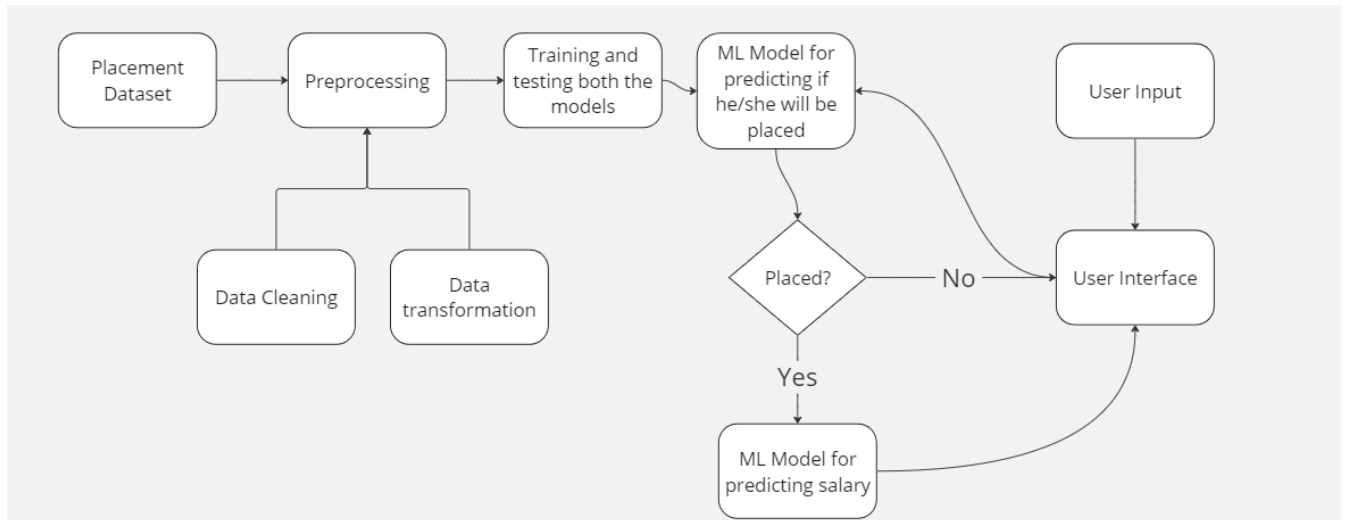
3. Architecture Description

3.1. Data Description

The Campus Placement Project App utilizes a dataset that contains information about students and their placements. The dataset includes the following features:

1. Gender: The gender of the student (Categorical: Male or Female).
2. SSC Percentage: The percentage of marks obtained in the 10th standard examination (Numerical).
3. SSC Board: The board of education for the 10th standard (Categorical: Central, State, or Others).
4. HSC Percentage: The percentage of marks obtained in the 12th standard examination (Numerical).
5. HSC Board: The board of education for the 12th standard (Categorical: Central, State, or Others).
6. HSC Stream: The stream chosen by the student in the 12th standard (Categorical: Science, Commerce, or Arts).
7. Degree Percentage: The percentage of marks obtained in the undergraduate degree (Numerical).
8. Degree Type: The type of undergraduate degree pursued (Categorical: Science & Technology, Commerce & Management, or Others).
9. Work Experience: Whether the student has work experience or not (Categorical: Yes or No).
10. Employability Test Percentage: The percentage score in the employability test (Numerical).
11. MBA Percentage: The percentage of marks obtained in the MBA degree (Numerical).
12. Specialization: The area of specialization in the MBA degree (Categorical).
13. Status: The placement status of the student (Categorical: Placed or Not Placed).
14. Salary: The salary offered to the student upon placement (Numerical, available only for placed students).

3.2. Data Preprocessing

- Standardization: Scaling numerical features to have zero mean and unit variance, using techniques like z-score normalization or min-max scaling.

- Encoding Categorical Variables: Converting categorical variables into numerical form so that they can be used in machine learning models. Techniques like one-hot encoding and label encoding are commonly used.

- Log Transform: Applying the logarithm transformation to data to reduce the effect of outliers and make the data more normally distributed.

- Feature Engineering: Creating new features from existing ones that can provide more relevant information to the model.

3.3. Model Building

- Develop predictive models for placement status and salary prediction using appropriate algorithms (e.g., logistic regression, linear regression, or SVM).
- Implement ensemble methods like random forest or gradient boosting for better accuracy.
- Utilize hyperparameter tuning to optimize model performance.

3.4. Data from User

Here we will collect placement related data from user such as SSC percentage , HSC percentage , SSC board, HSC stream and board, etest percentage ,etc