Low Level Design (LLD)

Campus Placement

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Document Version Control

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05/01/2024	1	Initial LLD – V1.0	Siddharth Daryani

Contents

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Introduction

What is LLD?

This is the most likely definition in the context of software development. It refers to the detailed design of a system's individual components, including:

- Data structures: how information is stored and accessed.
- Algorithms: the steps used to process data and perform tasks.
- Classes and functions: how the code is organized and interacts.
- Interfaces: how different components communicate with each other.

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

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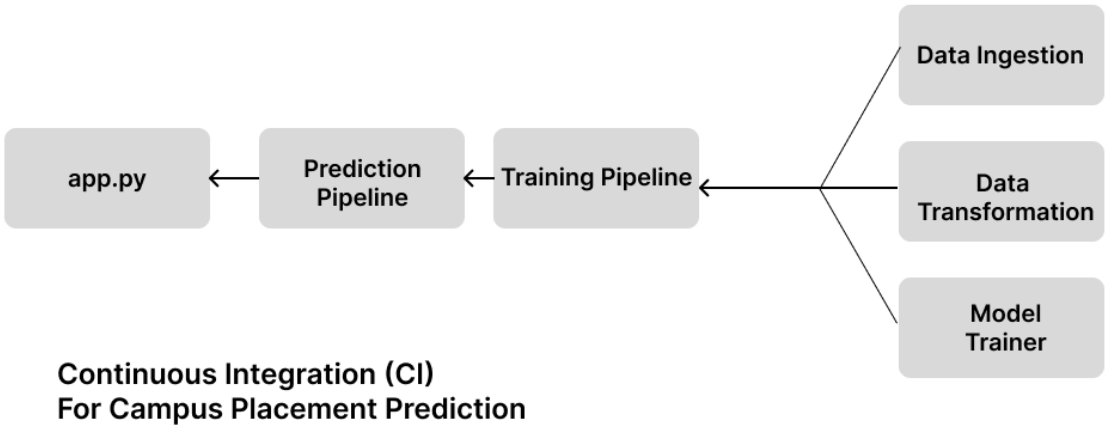
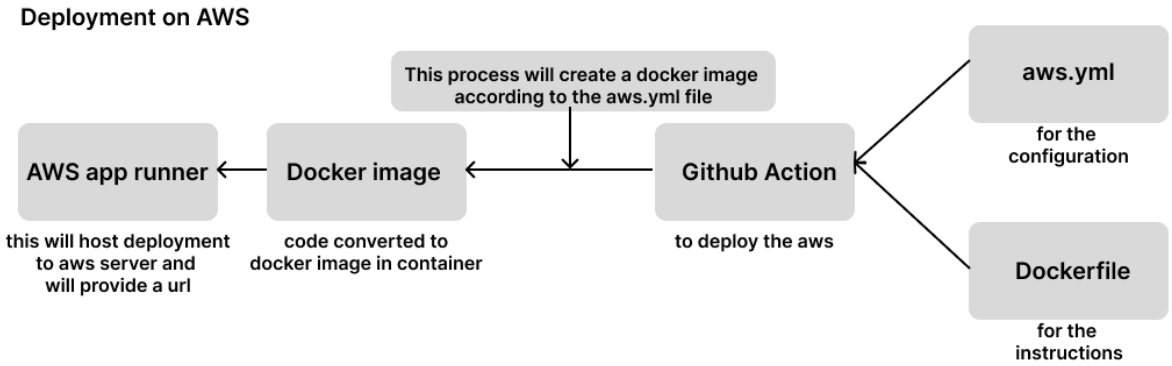
Architecture





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Architecture Description:

Data Description

Campus Placement Dataset is easily available on Kaggle, This data set consists of Placement data of students in our campus. It includes secondary and higher secondary school percentage and specialization. It also includes degree specialization, type and Work experience and salary offers to the placed students.

Data Transformation

In the Data Transformation process the numerical features were scaled using StandardScalar from sci-kit learn and the categorical features were Nominal encoded using OneHotEncoder also from sci-kit learn and functions like fit_transform() and transform() were applied on train and test data respectively

Model Training

The data was now getting trained in three different models

- LogisticRegression()
- DecisionTreeClassifier()
- KNeighborsClassifier()

And the best models were selected according to the maximum accuracy

Pre-Processor and Best Model

The .pkl file of Pre-Processor and model are saved in the artifacts folder in the process of Data Transformation and Model Training respectively.

Data from user

Data from user is gained from the form.html page which will appear on (/predict)

app route

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Data Validation

Here Data Validation will be done, given by the user.

Deployment

The deployment of this project is hosted on AWS app runner, the code is converted to a docker container according to the instruction given in Dockerfile and aws.yml files using Github Action (A service of github) which automates this process of creating a docker image and pushing it on AWS.