

Low-Level Design (LLD)

Airport Data Analysis

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Mukesh B

DOCUMENT CONTROL

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1. Introduction

1.1 What is Low-Level design document?

The goal of the LDD or Low-level design document (LLDD) is to give the internal logic design of the actual program code for the House Price Prediction dashboard. LDD describes the class diagrams with the methods and relations between classes and programs 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. The 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.

1.3 Project Introduction

Airport data analytics is one instrument that could change airport operations. While the Coronavirus has temporarily shut down airports (and rightly so, we can't let that virus spread!), this is an opportunity for airport managers and other stakeholders to take stock of their processes and identify key areas of weakness.

By identifying these areas, airport managers can find new opportunities to improve operations, making the entire process more efficient than before. When airports are ready for business again, they will operate more efficiently than before, which means higher passenger turnover, lower operating costs and even less pollution.

2. Problem Statement

Develop airport and airline data analysis dashboard development project in tableau for identifying where the various flights are going and what is the busiest and lengthiest routes from the airport.

From this insight of analysis, the business owner will increase their flight hours based on popular & busiest routes so they can easily analyse this dashboard

3. Dataset Information

Geometry Coordinates 0 0: Flight start point Coordinate(Float)

Geometry Coordinates 0 1: Flight start point Coordinate(Float)

Geometry Coordinates 1 0: Flight destination point Coordinate(Float)

Geometry Coordinates 1 1: Flight destination point Coordinate(Float)

Geometry Type : Multipoint (String)

Properties Edtf Cessation: Flight Departure date & time

Properties Edtf Inception: Inception code

Properties Flysfo Actual Timestamp: Actual time stamp

Properties Flysfo Airline: Arline code

Properties Flysfo Base Airline: Airline code

Properties Flysfo Base Flight Number: Flight no

Date: Flight Date

Properties Flysfo Estimated Timestamp: No of Flight hours

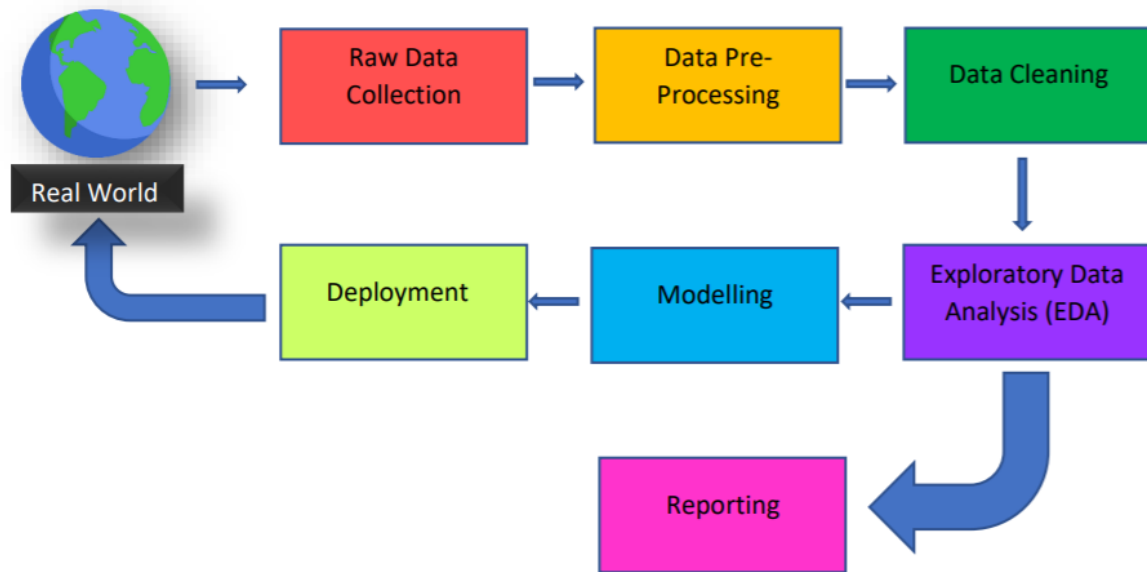
Properties Flysfo Event: Event no of Flight

Properties Flysfo Flight Number: Flight Number

Properties Flysfo Gate: Gate number of Flight

Route: Arrival & destination route name

3. Architecture



4.1 Architecture Description

1. Raw Data Collection

The Dataset was taken from iNeuron's Provided Project Description

Document. https://drive.google.com/drive/folders/1G2fQ6_1DcToyROYbsz-ILP6uwBJrvPu6?usp=sharing

2. Data Pre-Processing

Before building any model, it is crucial to perform data pre-processing to feed the correct data to the model to learn and predict. Model performance depends on the quality of data feeded to the model to train.

This Process includes

- a) Handling Null/Missing Values
- b) Handling Skewed Data
- c) Outliers Detection and Removal

3. Data Cleaning

Data cleaning is the process of fixing or removing incorrect, corrupted, incorrectly formatted, duplicate, or incomplete data within a dataset.

- a) Remove duplicate or irrelevant observations
- b) Filter unwanted outliers
- c) Renaming required attributes

4. Exploratory Data Analysis (EDA)

Exploratory Data Analysis refers to the critical process of performing initial investigations on data to discover patterns, spot anomalies, test hypothesis and to check assumptions with the help of summary statistics and graphical representations.

5. Reporting

Reporting is a most important and underrated skill of a data analytics field. Because being a Data Analyst you should be good in easy and self-explanatory report because your model will be used by many stakeholders

who are not from technical background.

- a) High Level Design Document (HLD)
- b) Low Level Design Document (LLD)
- c) Architecture
- d) Wireframe
- e) Detailed Project Report
- f) Power Point Presentation

6. Modelling

Data Modelling is the process of analysing the data objects and their relationship to the other objects. It is used to analyse the data requirements that are required for the business processes. The data models are created for the data to be stored in a database. The Data Model's main focus is on what data is needed and how we have to organize data rather than what operations we have to perform.

7. Deployment

I created a Tablue Dashboard

