Low Level Design (LLD)

HR Analytics

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Lally

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16-04-2023	3.0	Lally	Abstract, Introduction
18-04-2023	3.1	Lally	Architecture
21-04-2023	3.2	Lally	Architecture Description

Contents

Abstract

The management of human resources is today significantly impacted by the emergence of the global workforce and the increasing relevance of business analytics as a strategic organizational capability. Whereas human resources analytics has been largely discussed in literature in the last decade, a systematic identification and classification of key topics is yet to be introduced. In particular, there is room for conceptual contributions aiming to provide a comprehensive definition of concepts and investigation areas related to HR analytics. Using a systematic literature review process, we deconstruct the concept of human resources analytics as presented in a vast although fragmented literature, and we identify 106 key research topics associated to three major areas, i.e. enablers of HR analytics (technological and organizational), applications (descriptive and diagnostic/prescriptive), and value (employee value and organizational value). We also speculate on an "exponential" view of HR analytics enabled by the affirmation of artificial intelligence and cognitive technologies. The article provides a large systematization effort and a research agenda for developing further studies in the field of HR analytics. By a practitioner perspective, the study offers insights to support the design of innovative analytics projects within organizations.

1. Introduction

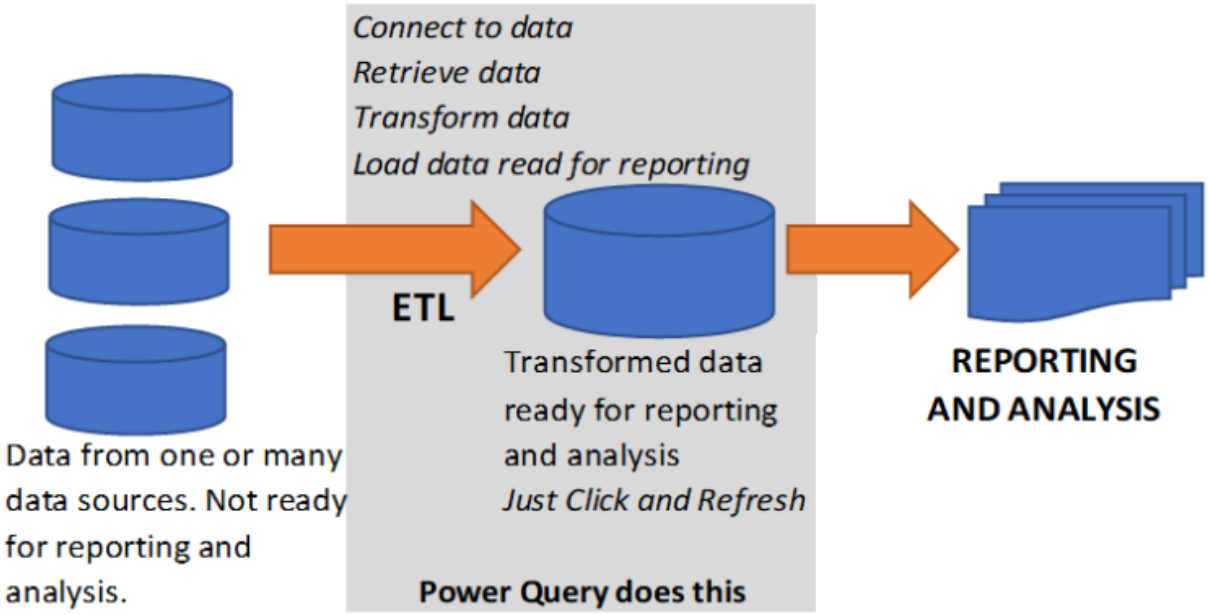
1.1. What is Low-Level design document?

The purpose of this LLD or a Low-Level Design (LLD) document is to give the internal logical design of the actual program code for Amazon Data Analysis project. 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. This document is intended for both the stakeholders and the developers of this project and will be proposed to the higher management for its approval

1.1. Scope

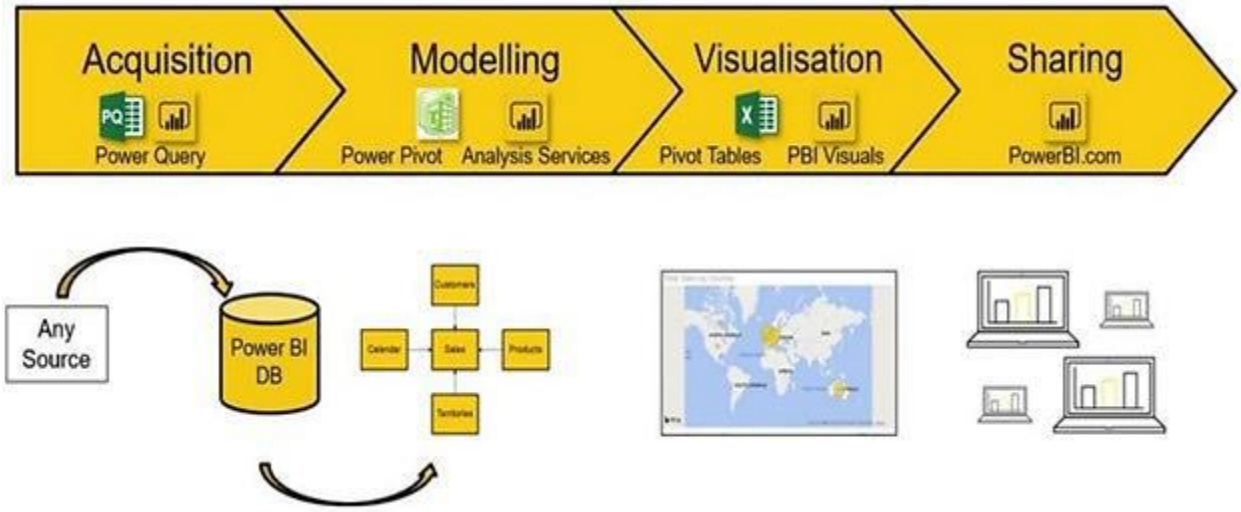
Low-level design (LLD) is a component-level design process that follows a step-by-step refinement process. This process can be used for designing data structures, required software architecture, source code and ultimately, performance algorithms. Overall, the data organization may be defined during requirement analysis and then refined during data design work. This study demonstrates how different analysis helps to make better business decisions and help analyze Overall employees in company and active employees average age of employees and job satisfaction Rating.

2.Architecture



ETL (extract, transform and load) in Power BI use the preparation of data sets for analysis by removing irregularities in the data. It also involves data visualization to draw meaningful patterns and insights

Below are the following steps to follow for ETL:
1. Data Sourcing
2. Data Cleaning
3. Data Modelling
4. Data Visualization



3. Architecture Description

3.1Data Sourcing

The dataset is in CSV (Comma Separated Values) format. MS Excel is used to load the data. This dataset is publicly available for research purposes.
Title: Amazon Sales Dataset.csv

3.2 Data Overview

4. The dataset is of size 253 KB
5. It includes a single file in ".csv" format.
6. Number of rows/records: 1200
7. Number of attributes: 29

3.3 Data Description

The following attributes describes the dataset.

Overall Employees

It Describes the total/ overall employees in the company

Active Employees

Active employees describe the how many active employees in the company

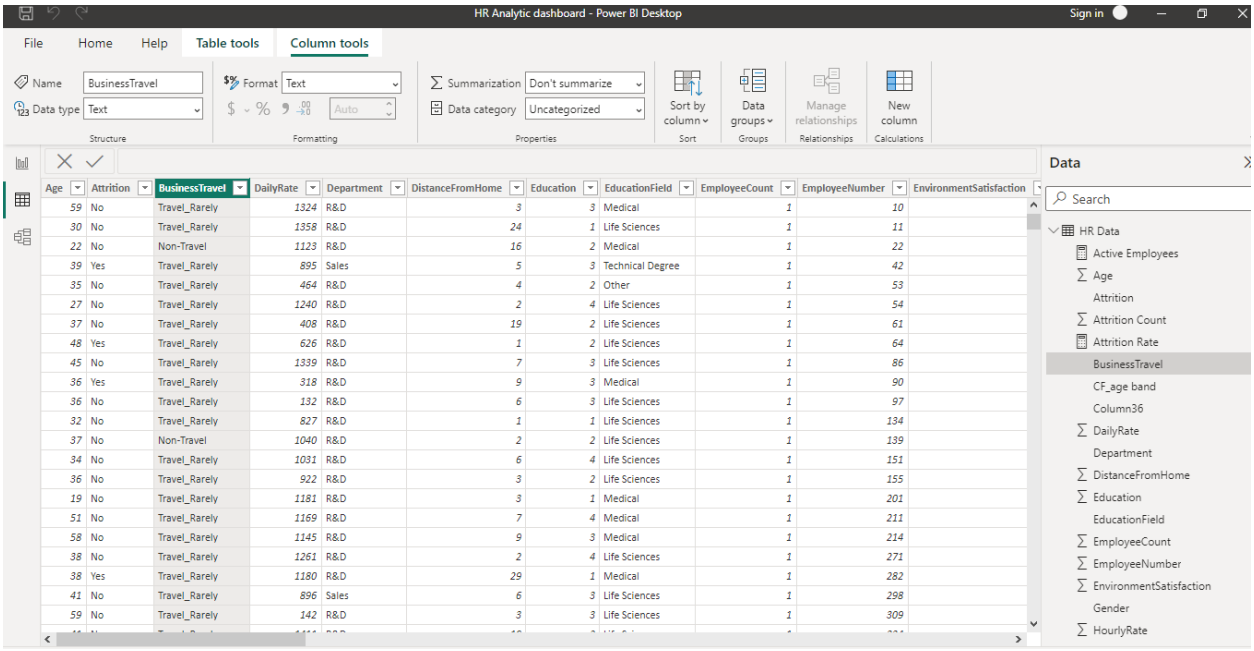
Average Age

Average age describe the average age of the employees

3.4 Data Loading in Power BI Query Editor

Power Query is the data connectivity and data preparation technology that enables end users to seamlessly import and reshape data from within a wide range of Microsoft products, including Excel, Power BI, Analysis Services, data verse, and more with the following characteristics.

- There can be multiple rows and columns in the data.
- Each row represents a sample of data,
- Each column contains a different variable that describes the samples (rows).
- The data in every column can be a different type of data like numbers, strings, dates, Boolean etc.



Age	Attrition	BusinessTravel	DailyRate	Department	DistanceFromHome	Education	EducationField	EmployeeCount	EmployeeNumber	EnvironmentSatisfaction
59	No	Travel_Rarely	1324	R&D	3	3	Medical	1	10	
30	No	Travel_Rarely	1358	R&D	24	1	Life Sciences	1	11	
22	No	Non-Travel	1123	R&D	16	2	Medical	1	22	
39	Yes	Travel_Rarely	895	Sales	5	3	Technical Degree	1	42	
35	No	Travel_Rarely	464	R&D	4	2	Other	1	53	
27	No	Travel_Rarely	1240	R&D	2	4	Life Sciences	1	54	
37	No	Travel_Rarely	408	R&D	19	2	Life Sciences	1	61	
48	Yes	Travel_Rarely	626	R&D	1	2	Life Sciences	1	64	
45	No	Travel_Rarely	1339	R&D	7	3	Life Sciences	1	86	
36	Yes	Travel_Rarely	318	R&D	9	3	Medical	1	90	
36	No	Travel_Rarely	132	R&D	6	3	Life Sciences	1	97	
32	No	Travel_Rarely	827	R&D	1	1	Life Sciences	1	134	
37	No	Non-Travel	1040	R&D	2	2	Life Sciences	1	139	
34	No	Travel_Rarely	1031	R&D	6	4	Life Sciences	1	151	
36	No	Travel_Rarely	922	R&D	3	2	Life Sciences	1	155	
19	No	Travel_Rarely	1181	R&D	3	1	Medical	1	201	
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58	No	Travel_Rarely	1145	R&D	9	3	Medical	1	214	
38	No	Travel_Rarely	1261	R&D	2	4	Life Sciences	1	271	
38	Yes	Travel_Rarely	1180	R&D	29	1	Medical	1	282	
41	No	Travel_Rarely	896	Sales	6	3	Life Sciences	1	298	
59	No	Travel_Rarely	142	R&D	3	3	Life Sciences	1	309	

3.5 Data to Insights through Visualizations and Data Analysis