# High Level Design (HLD)

# Amazon Sales Data Analysis

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## Document Version Control

| Date Issued | Version | Description | Author |
|---|---|---|---|
| **20/01/2023** | 1.0 | Final Version of Complete HLD | Akilan JS<br>Rasiga R |
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# Contents

## Abstract

Amazon Sales Management is looking for improved methods to increase sales and profits. The management has asked to create sales report on Yearly, Monthly Sales Trend to understand the market behavior. They're looking for relationships between different variables that directly affect sales.

As a Data Analyst, We have to take data from last three years, clean, explore and visualize it to find the possible insights that will drive the sales in future. A thorough report withnecessary and clear visuals telling the story with insights is the need of the hour.

# 1 Introduction

## 1.1 Why this High-Level Design Document?

The purpose of this High-Level Design (HLD) Document is to add the necessary detail to the current project description. This document is also intended to help detect contradictions prior to coding/visualizations, and can be used as a reference manual to understand the though process behind creating visuals.

The HLD will:

- Present all of the design aspects and define them in detail
- Describe the user interface being implemented
- Describe the hardware and software interfaces
- Describe the performance requirements
- Include design features and the architecture of the project
- List and describe the non-functional attributes like:
    - Security
    - Reliability
    - Maintainability
    - Portability
    - Reusability
    - Application compatibility
    - Resource utilization

## 1.2 Scope

The HLD documentation presents the structure of the system, such as the data architecture, application architecture (layers), application flow (Navigation), and technology architecture. The HLD uses non-technical to mildly-technical terms which should be understandable to the administrators of the system.

# 2 General Description

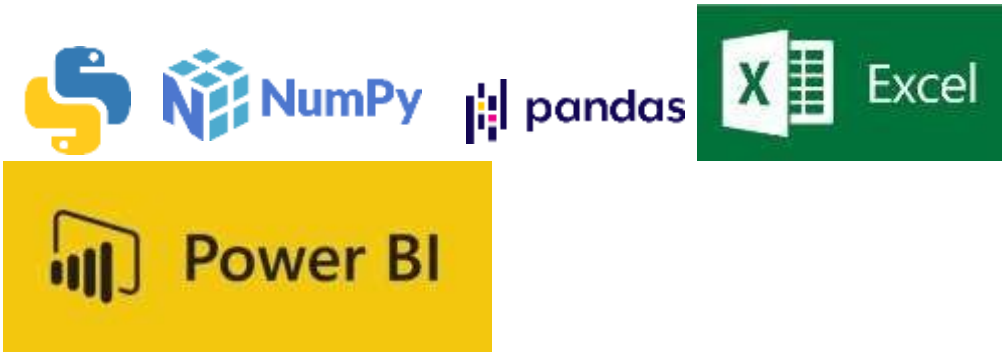
## 2.1 Business Perspective & Problem Statement

Amazon is a global e-commerce brand establishing businesses across the world. The stakeholders are looking to understand market behavior and sales trend to gain a competitive advantage.

The objective of the project is to create a report on Sales trend year-wise, month-wise to understand the factors directly affecting the sales. This project aims apply Business Intelligence tool such as Power BI to get a visual understanding the sales data.

## 2.2 Tools used

Business Intelligence tools and libraries works such as NumPy, Pandas, Excel and Power BI are used to build the whole report.



# 3 Design Details

## 3.1 Functional Architecture

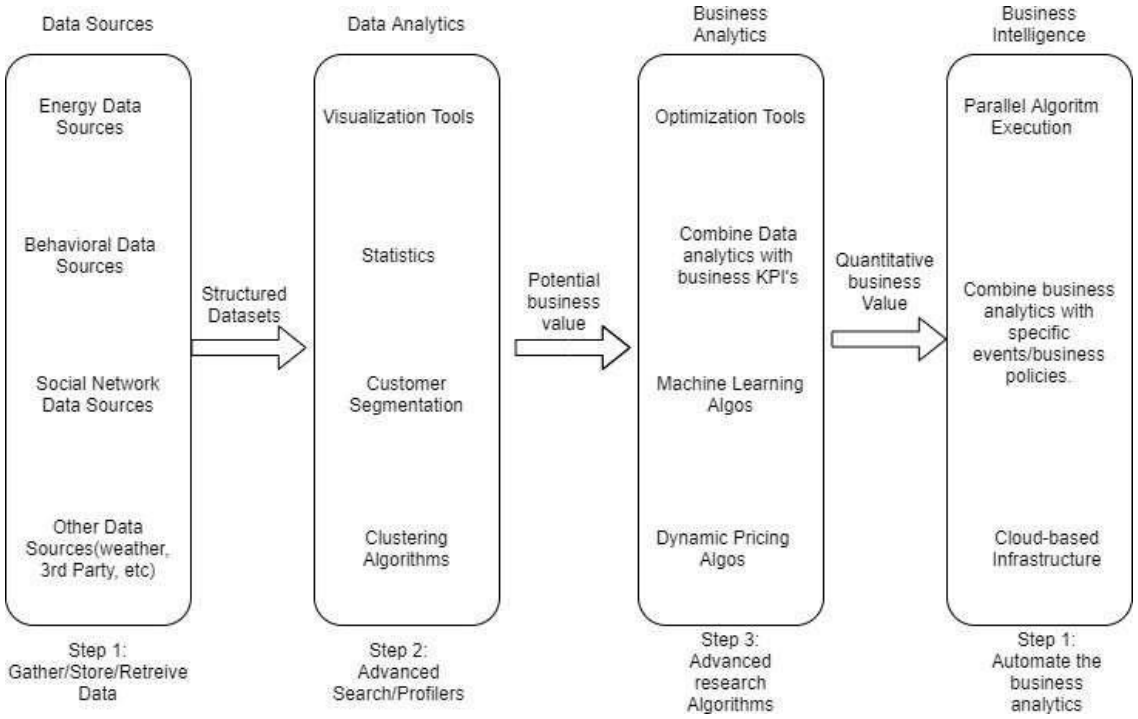
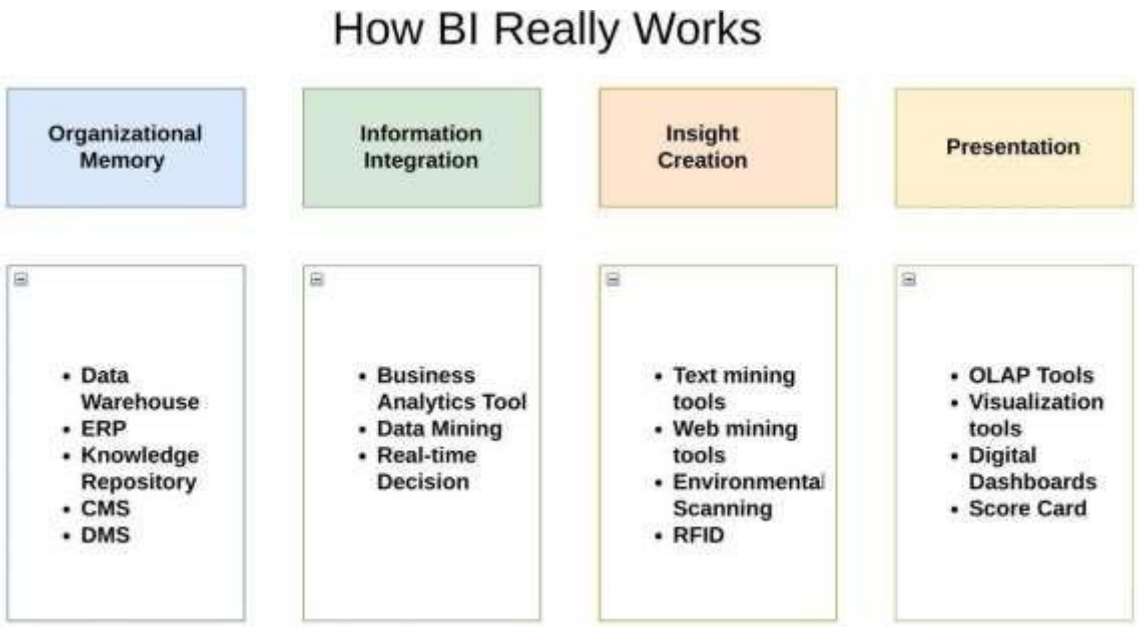



Figure 1: Functional Architecture of Business Intelligence



## 3.2 Optimization

**Your data strategy drives insights**

- Cleaning Data by imputing missing values or removing missing values.
- Changing and converting the column data types.
- Creating measures to create values for simple card views. Optimize space to ensure every chart or visuals is fitting and telling the same story.

**Reduce the marks (data points) in your view**

- Practice guided analytics. There's no need to fit everything you plan to show in a single page. Compile related visuals and connect them with action filters to travel from overview to highly-granular views at the speed of thought.
- Creating charts that explore relationship between different variables in the dataset.

# 4 KPIs

Reports will be created to display and indicate certain KPIs and relevant indicators for sales.


## 4.1 KPIs (Key Performance Indicators)

Key performance indicators display a summary of the Sales and its relationship with different variables.

1. Impact of Time of the year on Sales. (e.g. Festive Months, Big Sale Months)
2. Impact of Discount Amount on Sales
3. Top Items ordered and their list price
4. Top Performing Sales Representatives who are bringing cash into the company
5. Items who have higher margin amount
6. Influence of discounts on sales quantity and number of orders.

# 5 Deployment

Power BI Desktop needs professional email-id to save and publish your dashboard on the Power BI database. You need to login to your account and publish your work on to your workstation. You can send invites to your co-workers and ask them to join or contribute to the report. Saving the Power BI file into your local system and publishing into your GitHub account can be another option to share your work with other connections and decision makers