HIGH LEVEL DOCUMENT

AMAZON SALES DATA ANALYSIS

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MITESH ADELKAR

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ABSTRACT

This analysis report examines the performance of Amazon's food sales from 2017 to 2019, providing insights into key trends and patterns within the industry. This document will be useful for building a dashboard in order to visualize these trends and gain useful insights. This report consists of a list of various food items which have been ordered through amazon between the years 2017 and 2019. The main aim is to conduct a detail analysis of the amazon food sales data and visualize it in order to gain insights. This dashboard will be useful for the organization in order to make cost effective decisions and improve their sales and profits earned.

Accurately showing the data related to the sales made including revenue generated, profits made, how much discount was provided etc. is a tedious task which requires usage of powerful visualization tools such as Power BI, Microsoft Excel etc.

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 to represent a suitable model for coding. This document is also intended to help detect contradictions prior to coding, and can be used as a reference manual for how the modules interact at a high level.

THE HDL WILL:

- Present all 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
- Serviceability

1.2 SCOPE

The HLD documentation presents the structure of the system, such as the database 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 PRODUCT PERSPECTIVE AND PROBLEM STATEMENT

Sales management has gained importance to meet increasing competition and the need for improved methods of distribution to reduce cost and to increase profits. Sales management today is the most important function in a commercial and business enterprise.

Do ETL: Extract-Transform-Load on some Amazon dataset and find for me Sales-trend -> month wise, year wise, yearly-month wise.

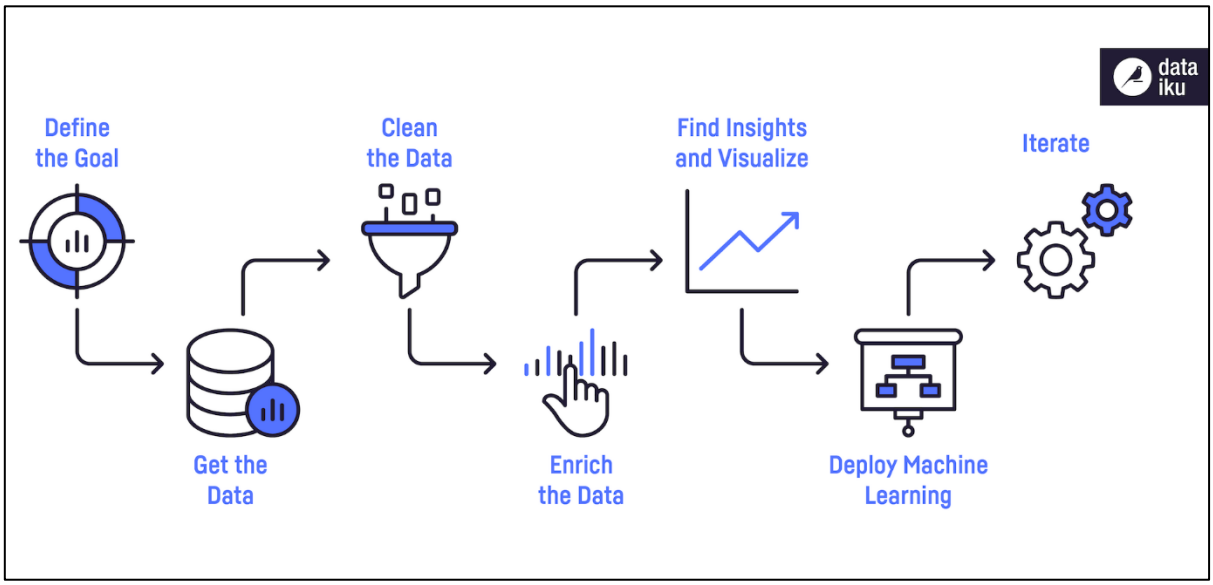
Find key metrics and factors and show the meaningful relationships between attributes. Do your own research and come up with your findings.

2.2 TOOLS USED

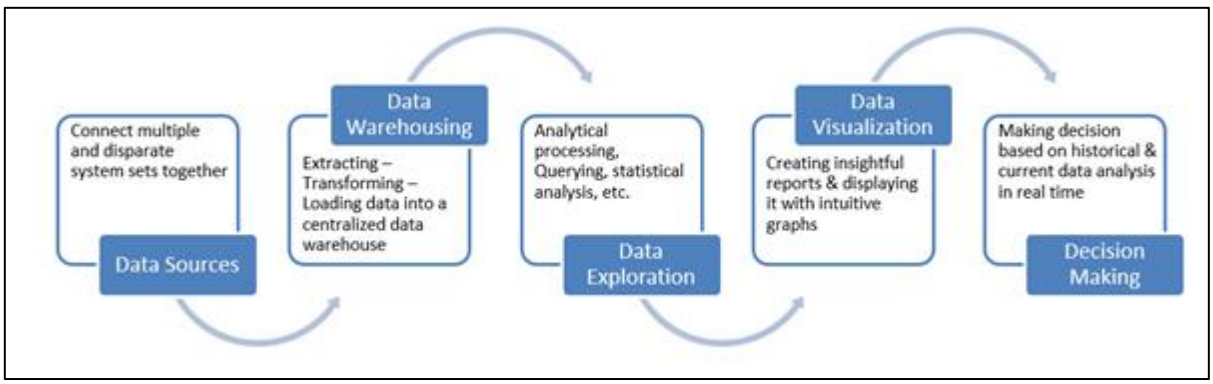
Business Intelligence tools such as Power BI, Microsoft Excel etc. are used in order to develop this dashboard and visualize the trends and gain useful insights.

3. DESIGN DETAILS

3.1 FUNCTIONAL ARCHITECTURE



3.1 HOW BUSINESS INTELLIGENCE REALLY WORKS?



3.2 OPTIMIZATION

DATA STRATEGY

Limit the number of fields according to needs

Keep useful fields only and remove the rest

Minimize the number of records for better analysis

Remove records with null values present

REDUCE DATA POINTS IN YOUR VIEW

Do not try to fit everything in one view itself

Remove unnecessary columns and dimensions

Try displaying your data in various views

LIMIT YOUR FILTERS

Reduce the number of filters in use

Do not use excessive filters to make everything complex

Double check filters and remove the unnecessary filters

Reduce the load on queries

OPTIMIZE THE CALCULATIONS

Perform calculations in the database

Reduce the number of nested calculations

4. KPI's AND CHARTS

A dashboard will be created in order to show the relevant KPI related to the amazon food sales and this specific dashboard will also include various charts and graphs which will help in order to show relevant KPIs and gain insights in order to make business decisions for improving sales and earn greater profits in the future.

4.1 KPI (KEY PERFORMANCE INDICATORS)

- Total Revenue
- Profit without Discount
- Profit with Discount
- Total Products ordered
- Total number of customers
- Actual Profit Earned
- Actual Profit % Percentage

4.2 CHARTS

- Profit vs Profit with discount by Year, Month
- Profit Earned by Month and Years
- Profit by Years, Line chart
- Number of customers by Month, Year
- Actual Profit vs Discounted Profit
- Revenue Generated, Profit Made, Discounted Profits Made
- Top 10 Products Overall and by Months, Year etc.

5. DEPLOYMENT

This project is created using Power BI. It is a visualization tool which is used in order to visualize data in order to generate useful insights and understand more about the factors which affect the businesses. With the help of these powerful visualizations, we expect to get accurate results and hence improve our ability to make decisions effectively.

This project aims to give organization a detailed report of the amazon food sales analysis and hence help the organization make effective decisions in order to improve their business and gain more profits in the upcoming years.

This project will be shared on GitHub, where it is being deployed for watching purposes. It can easily be downloaded and run on any machine which consists of the Power BI software.

Amazon food sales analysis have been completed by doing ETL process in order to clean and get data ready for our analysis. This will help to get better insights about the data and help is storytelling of the raw data.