(Big) Data Engineering In Depth
From Beginner to Professional

Moustafa Alaa
Senior Big Data Engineer
 MoustafaAlaa in Moustafa Alaa @Moustafa_alaa22
 Garage Education
 mustafa.alaa.mohamed@gmail.com

The Definitive Guide to Big Data Engineering Tasks

Videos classification

Watching Method / Audience	Computer	Mobile/Tablet	Just listening
Developer		●	
DevOps		●	
Business		●	

Table: Video classification
The green circle ● means short video.
The blue circle ● means medium video.
The red circle ● means long video

Section: Introduction to DWH

Sub-Section: Motivation to the Data Warehouse (DWH)

Motivation to the Data Warehouse (DWH)

- Data could be a product for some companies.

- It could be decision support for other products or businesses.

- It could be reporting the results after passing the data life-cycle from storage (Database).

- Some challenges are facing the people who work on data management backend:
  - Performance,
  - Integration,
  - and Applying analytical functions.

- Vendors who are working on solving the above challenges are creating their product of DWH. Their ultimate goal is to optimize the above points.

Motivation to the Data Warehouse (DWH)

Definition (What is Data Warehousing?)

A DWH is a technique for collecting and managing data from varied sources to **provide meaningful business insights**. It is a blend of technologies and components which aids the strategic use of data.

Inmon Bill gave the real concept. He is considered the father of the DWH. He had written about a variety of topics for building, usage, and maintenance of the warehouse & the Corporate Information Factory

Motivation to the Data Warehouse (DWH)

- The DWH is not a product but an environment.

- It is a process of transforming data into information and make it available to users in a **timely manner** to make a difference.

- It is an architectural construct of an information system that provides users with current and historical decision support information which is difficult to access or present in the traditional operational data store.

- The DWH is the core of the BI system built for data analysis and reporting.

Motivation to the Data Warehouse

Other names for the Data warehouse system:

- Decision Support System (DSS).

- Business Intelligence Solution.

- Executive Information System.

- Management Information System.

- Analytic Application.

- Data Warehouse.