

## **Individual Task 2 -Module 2**

### **My Daily Data Inventory: Track the Types and Sources of Data I Interact With Daily and Classify Them as Structured, Semi-Structured, or Unstructured.**

#### **INTRODUCTION :**

In today's digital world, data plays a central role in almost every activity we perform. From the moment we wake up and check our mobile phones to the time we go to sleep, we continuously interact with different types of data. Whether we are sending messages, browsing websites, watching videos, using GPS navigation, shopping online, or attending online classes, data is constantly being created, processed, stored, and analyzed.

Understanding the types and sources of data we encounter daily helps us become more aware of how digital systems function and how information flows in modern society.

This report presents a detailed daily data inventory, identifying the different sources of data I interact with and classifying them into three main categories: structured data, semi-structured data, and unstructured data. Structured data refers to highly organized information stored in rows and columns, such as databases and spreadsheets. Semi-structured data contains some organization but does not follow a rigid format, such as emails or JSON files. Unstructured data includes information that does not have a predefined format, such as images, videos, and audio recordings. By examining these categories in everyday activities, this report highlights how data shapes daily life and digital experiences.

## **Morning Routine and Mobile Device Data :**

My interaction with data begins as soon as I wake up and check my smartphone. The alarm application itself stores structured data such as time settings, dates, and user preferences in a database format. When I check the weather application, it provides structured data like temperature, humidity percentage, wind speed, and forecast timings, which are stored in tabular form on servers. These values are clearly organized and easy for systems to process.

When I open messaging applications such as WhatsApp or SMS, I interact with both structured and unstructured data. The contact list, phone numbers, and timestamps are examples of structured data because they are organized systematically in databases. However, the text messages, voice notes, images, and videos shared through these apps are forms of unstructured data because they do not follow a strict tabular format. Emails also represent semi-structured data since they contain organized fields like sender, receiver, subject, and date, but the email body itself may contain unstructured text, images, or attachments.

Additionally, notifications from various apps contain semi-structured data. For example, a notification includes fields such as app name, time, and message preview, but the content itself may vary in format. Thus, even during my morning routine, I interact with multiple types of data formats without consciously realizing it.

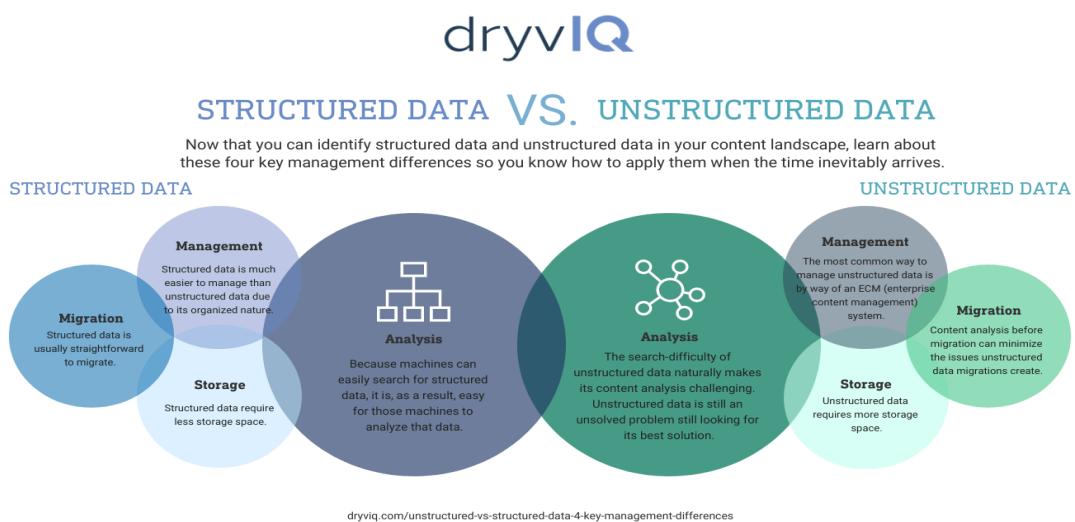
## **Educational and Work-Related Data :**

During school or work hours, digital platforms play a significant role in handling data. When attending online classes or accessing learning management systems such as Google Classroom, I interact with structured data like student IDs, attendance records, grades, and assignment deadlines. These are stored in databases with clear rows and columns to ensure efficient retrieval and management.

Study materials such as PDF documents, Word files, presentations, and recorded lectures represent unstructured data. These files contain text, images, charts, and multimedia content that do not follow a strict database structure. When submitting assignments through online portals, metadata such as submission time, file size, and student details are structured data, while the actual content of the assignment is unstructured.

Spreadsheets used for tracking marks or project progress are classic examples of structured data because they are organized into rows and columns. On the other hand, discussion forums used for academic conversations contain semi-structured data, as posts include usernames and timestamps but allow free-form text in responses. This mixture of data types demonstrates how digital education platforms rely on multiple formats to function effectively.

## Social Media and Entertainment Data:



Social media platforms generate and process enormous amounts of data daily. When I scroll through Instagram, Facebook, or YouTube, I engage primarily with unstructured data such as photos, videos, comments, and live streams. These forms of media do not fit neatly into tables and require advanced processing techniques such as image recognition and natural language processing.

However, behind the scenes, structured data plays an important role. User profiles, follower counts, likes, shares, and timestamps are stored in structured databases. These elements are numerical or categorical and can easily be analyzed. Semi-structured data appears in the form of posts that contain hashtags, captions, tagged locations, and mentions. While they follow certain patterns, they do not have a fixed structure like a spreadsheet.

Streaming platforms like Netflix and Spotify also rely on structured data such as user IDs, watch history, subscription plans, and ratings. Meanwhile, the actual movies, music files, and podcasts are unstructured data. Recommendation systems analyze structured user behavior data along with unstructured content to personalize suggestions. Therefore, entertainment platforms combine different data types to enhance user experience.

## **Online Shopping, Banking, and Digital Transactions :**

E-commerce websites and online banking systems rely heavily on structured data. When I shop online, product details such as price, quantity, stock availability, and order ID are structured data stored in relational databases. Payment information, transaction history, and billing records are also highly structured because financial systems require accuracy and organization.

Customer reviews and product descriptions represent semi-structured or unstructured data. Reviews often include star ratings (structured) along with written feedback (unstructured). Digital receipts sent via email are semi-structured because they include defined fields like order number and payment method along with descriptive content.

Banking applications store account numbers, balances, transaction dates, and amounts as structured data. Security logs and authentication records are also structured. However, uploaded documents such as identity proofs or scanned forms are unstructured data. These systems demonstrate how structured data ensures reliability and security, while unstructured data supports documentation and communication.

## **Sensors, Location Data, and Smart Technologies :**

Modern smartphones and smart devices collect data through sensors. GPS applications collect structured data such as latitude, longitude, speed, and route information. Fitness trackers monitor steps, heart rate, calories burned, and sleep patterns, which are stored as structured numerical data. These values are analyzed to generate reports and health insights.

Photos taken with a smartphone camera are unstructured data because they consist of pixels without a predefined table format. However, image files also contain metadata such as date, time, device model, and location, which are semi-structured data. Voice assistants process unstructured audio input but convert it into structured commands that systems can interpret.

Smart home devices like smart bulbs and security cameras generate both structured and unstructured data. Usage logs and activity timestamps are structured, while recorded video footage is unstructured. The integration of sensors into daily life shows how data collection has become continuous and automatic, often operating in the background without direct user awareness.

## **CONCLUSION :**

The daily data inventory reveals that modern life is deeply interconnected with various forms of data. From communication and education to entertainment, shopping, and health monitoring, structured, semi-structured, and unstructured data are constantly being generated and processed. Structured data provides order and efficiency through organized storage formats such as databases and spreadsheets. Semi-structured data offers flexibility by combining defined fields with adaptable content. Unstructured data captures rich and complex information such as images, videos, and free-text communication.

Understanding these data types increases awareness of how digital systems operate and how personal information flows across platforms. It also highlights the importance of data management, cybersecurity, and privacy in a technology-driven society. By examining everyday interactions with data, we can better appreciate the invisible infrastructure that powers digital services. Ultimately, recognizing the role of structured, semi-structured, and unstructured data in daily life encourages responsible usage and informed decision-making in the digital age.