



TYPES OF DATA

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TYPES OF DATA

There are many types of data in business process but mainly use 3 data types only.

1. Structured data
2. Unstructured data
3. Semi-Structured data

What is Structured data?

Relational databases are commonly used to store structured data. Fields are used to hold data of a defined length, such as phone numbers, Social Security numbers, or ZIP codes. Even text strings of varying lengths, such as names, are stored in records, making searching a breeze.

Data can be created by humans or machines as long as it is stored in an RDBMS structure. This style is extremely searchable, both through human-generated searches and through algorithms that use data types and field names like alphabetical or numeric, currency, or date.

Airline reservation systems, inventory control, sales transactions, and ATM activity are examples of relational database applications containing structured data. SQL makes it possible.

What is Unstructured data?

Everything else is considered unstructured data. Unstructured data is structured internally but not through pre-defined data models or schema. It might be textual or non-textual, and it can be created by humans or machines. It may potentially be kept in a NoSQL database, which is a non-relational database. Text files, emails, media, and so forth.

What is Semi-Structured data?

Semi-structured data is information that is not stored in a relational database but has certain organized organizing features that make analyzing unstructured data considerably easier. It is feasible to transform semi-structured data to structured data and then store it in a relational database with some extra cleaning and changes, although this is seldom done. The majority of the time, structured data is transformed to semi-structured data in order to save storage space. XML, for example.

Comparison Of Structured Data Vs Semi-Structured Data Vs Unstructured Data

Properties	Types of data		
	<u>Structured</u>	<u>Semi-Structured</u>	<u>Unstructured</u>
Worth	Provides insight on the context of the data in a clear manner, so is very valuable	As this data lacks certain features to be informative, the value can be debatable as a significant effort is in due to provide real value.	Almost always has less value.
Habitat	Occurs mainly in relational database systems.	Occurs with meta-tags in database systems, as XML or JSON/BSON.	Can occur anywhere, as long as the habitat is not structured, occurs as log files.
SQL compatibility	Complex SQL commands can be performed.	Basic CRUD SQL commands can be performed.	Only SQL SELECT or similar commands can be performed.
Usage	Top level management	Rarely at top-level management using reporting tools but commonly in operational levels.	Only in operational levels.
Sources	From data warehouses, data marts etc.	Uncleaned data cubes.	Operational-level databases.
Accuracy	Finds a high accuracy for any given situation.	Finds considerable accuracy for suitable situations.	Accuracy cannot be considered with unstructured data.
Integrity	If the habitat is secure, then there are no questions about integrity.	Dependable	Dependable

Process performance	Easily processable as there is definite structure, so performance is high.	Streamlined processing methods must be used to define structure and process, so performance is debatable.	The larger the unstructured data, the slower it gets.
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