

# Study Notes

Here are your SHORT, VISUAL study notes for Data Mining:

## ■ Key Concepts

- \*\*Data Mining (DM)\*\*: Extracting "knowledge" from large datasets using stat & computational methods.
- \*\*Knowledge Extraction\*\*: Finding valuable, hidden insights within raw data. ■
- \*\*Patterns & Relationships\*\*: Discovering regularities or connections in data. ■
- \*\*Informed Decisions\*\*: Using data insights to make better choices or predictions. ■

## ■ Important Points

- DM uses various \*\*statistical\*\* & \*\*computational\*\* techniques. ■■
- Works with \*\*structured\*\*, \*\*semi-structured\*\*, & \*\*unstructured\*\* data. ■■■■
- Data sources include \*\*databases\*\* & \*\*data warehouses\*\*. ■
- The primary goal is to find \*\*hidden patterns\*\* & \*\*relationships\*\* to enable predictions. ■■■■■■■
- Key DM techniques mentioned: \*\*Classification\*\*, \*\*Regression\*\*, \*\*Clustering\*\*.

## ■ Quick Facts

- DM identifies \*\*useful information\*\* from raw data. ■
- Helps forecast future outcomes or trends. ➔■■
- Operates on "large amounts of data." ■

## ■ Memory Tips

- \*\*DM is KEDS\*\*: \*\*K\*\*nowledge \*\*E\*\*xtraction, \*\*D\*\*ecision-making, \*\*S\*\*tatistical & Computational.
- Think of DM as a \*\*Data Detective\*\*: searches for hidden clues (patterns) to solve a mystery (mak...)

## ■ Reference Images

### Image 1

Fundamental of Data Mining

(\*) Association Rule Data Mining Concepts

Introduction:-

Data Mining Definition

Data Mining is the process of extracting knowledge from large amount of data using various statical and computational techniques. The data can be structured, semi-structured or unstructured and can be stored in various form such as databases, data warehouses, and data lakes.

Definition:-

"Data Mining is the process of searching and analyzing a large batch of raw data in order to identify patterns and extract useful information"

Goal of data Mining

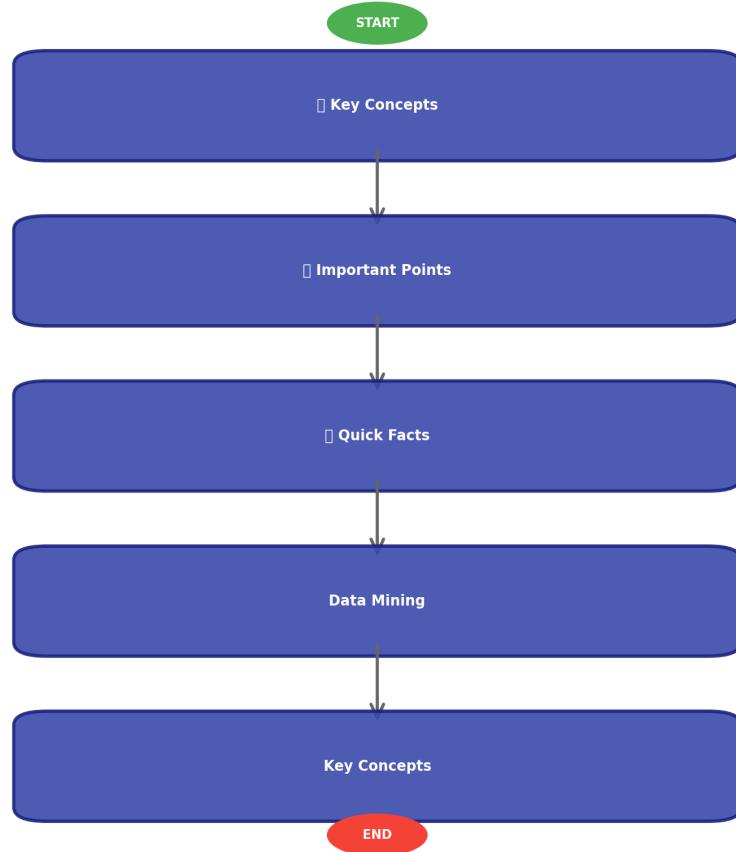
The primary goal of data Mining is to discover hidden patterns and relationships in the data that can be used to make informed decisions or predictions. This involves exploring the data using various techniques such as clustering, classification, regression

## ■ Visual Diagrams

### Concept Mind Map



### Process Flowchart



## Concept Hierarchy

