

two dimensional array

$$\begin{bmatrix} + & 2 \\ 3 & 4 \end{bmatrix} * \begin{bmatrix} + & 2 \\ 3 & 4 \end{bmatrix}$$

$$\begin{bmatrix} 1 & 4 \\ 9 & 16 \end{bmatrix} \text{ element wise}$$

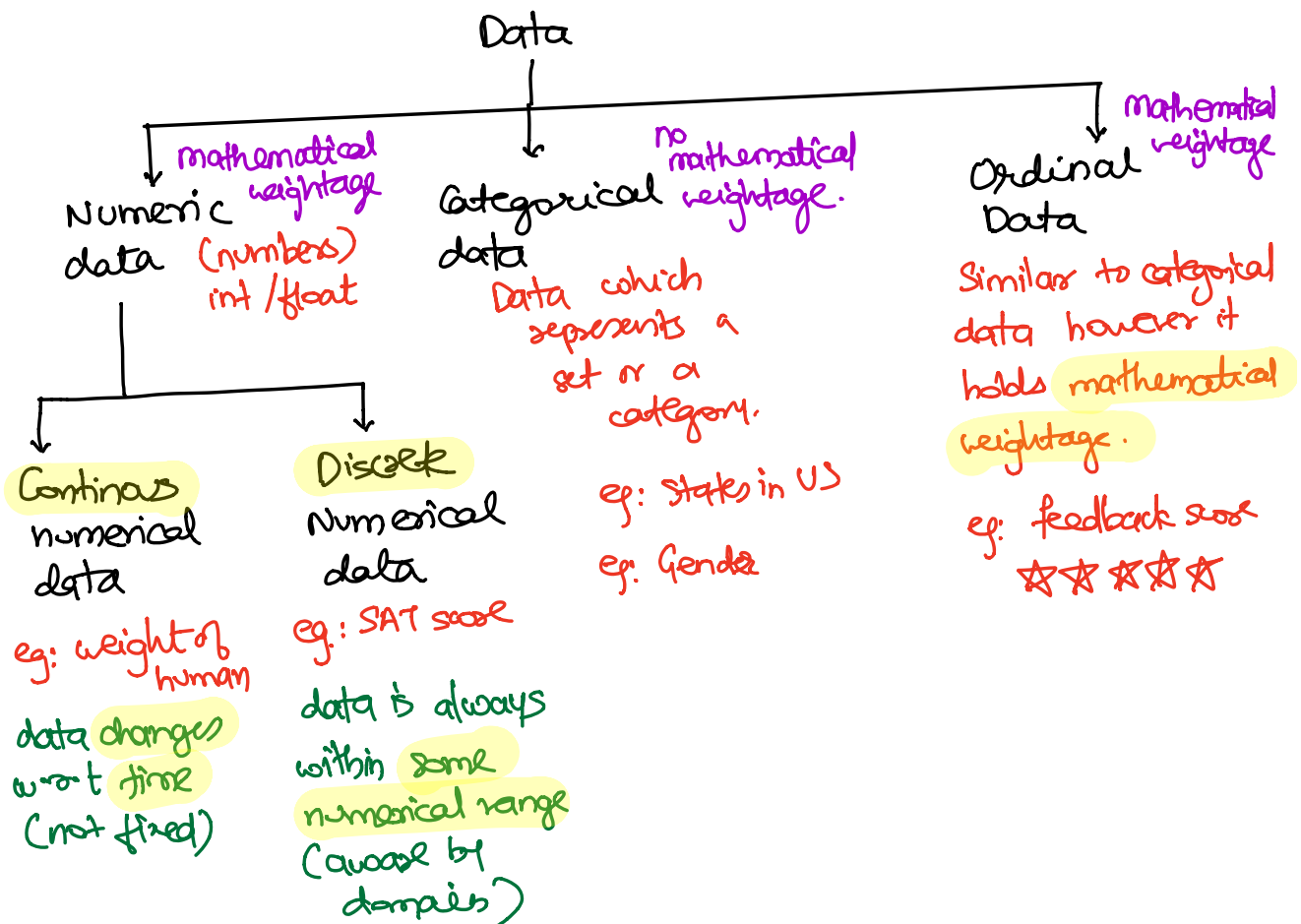
matrix

$$\begin{bmatrix} 1 & 2 \\ 3 & 4 \end{bmatrix} * \begin{bmatrix} 1 & 2 \\ 3 & 4 \end{bmatrix} = \begin{bmatrix} 7 & 10 \\ 15 & 22 \end{bmatrix} //$$

$$\frac{0}{1} \begin{bmatrix} \frac{0}{1} & 1 \\ 3 & 4 \end{bmatrix}$$

$$0, 0 = 1$$

Machine Learning \rightarrow Static model.



How to solve a machine learning problem?

- ① Data Preparation. (making your data compatible for algo)
 - ① Handle inappropriate data.
 - ② Handle missing data.
 - ③ Handle categorical data.
 - ④ Handle ordinal data.
 - ⑤ Feature Scaling (optional - subject to algo)
- ② Identify which algorithm will you use to create the model.
- ③ Separate your data as features and label.
- ④ Create a model.
- ⑤ Test your model to check the quality of the model.
 - Check generalization of the model.
 - Check the accuracy score.
- ⑥ Fine tune the model by tweaking hyperparameters.
- ⑦ Deploy your model.

Data Preparation

It's all about preparing your data as per the norms of the algorithm.

Every ML algorithm expects the following:

⇒ (a) Your data must be complete.

⇒ (b) Your data must be strictly NUMERIC.

Implementing ML algorithm in Python we are going to use scikit-learn package.

⇒ (c) Your data must be in the form of Numpy array