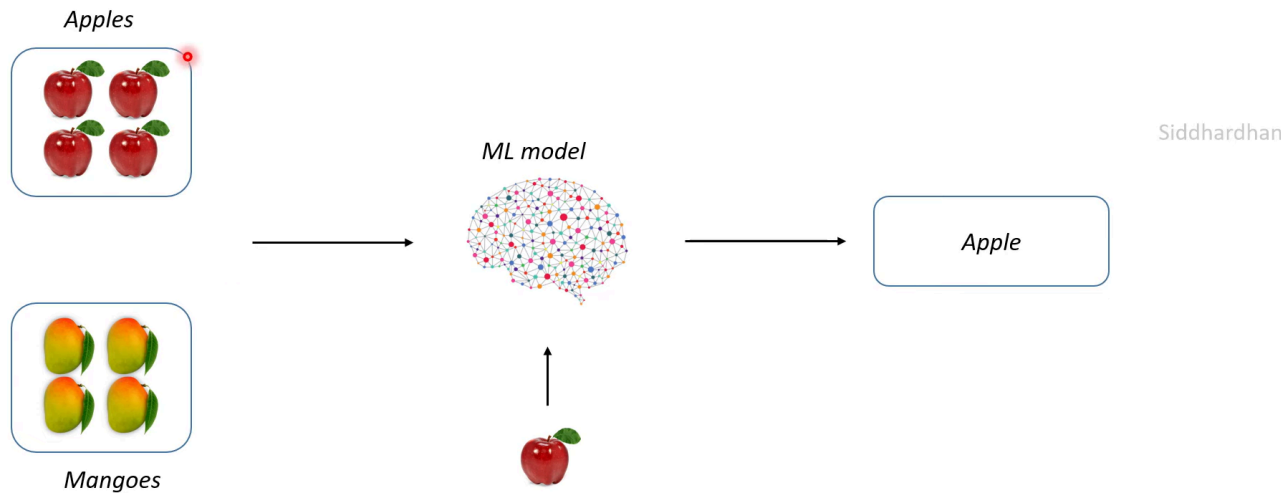


# Supervised and unsupervised model

*In Supervised Learning, the Machine Learning algorithm learns from **Labelled Data***



## *Supervised Learning*

### *Classification*

*Classification is about predicting a class or discrete values  
Eg: Male or Female; True or False*

Evaluation metric for  
Classification: **Accuracy score**

### *Regression*

*Regression is about predicting a quantity or continuous values  
Eg: Salary; age; Price.*

Evaluation metric for  
Regression: **Mean Absolute Error**

## Accuracy score and mean absolute error explained in Model Evaluation

## Supervised Learning Models

### *Classification:*

1. Logistic Regression
2. Support Vector Machine Classifier
3. Decision Tree
4. K-Nearest Neighbors
5. Random Forest
6. Naïve Bayes Classifier

### *Regression:*

1. Linear Regression
2. Lasso Regression
3. Polynomial Regression
4. Support Vector Machine Regressor
5. Random Forest Regressor
6. Bayesian Linear Regressor

Siddhardhan

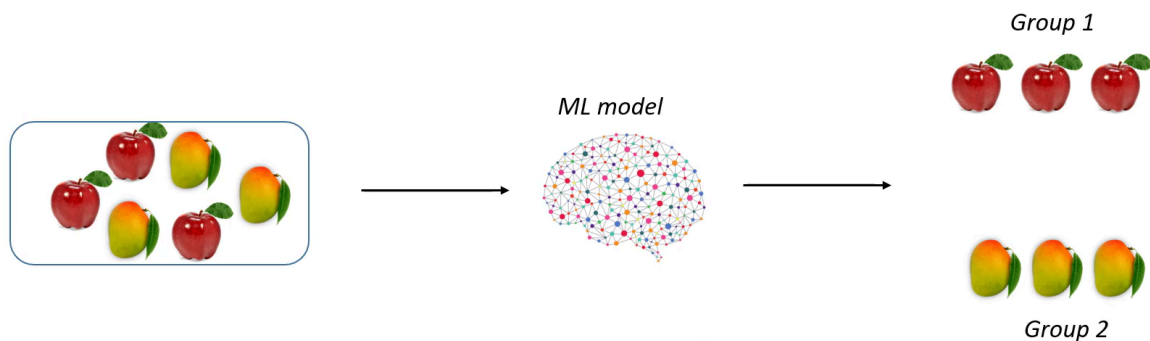
classification ex: dog or cat, true or false

regression ex: salary

## Unsupervised

### Unsupervised Learning

*In Unsupervised Learning, the Machine Learning algorithm learns from **Unlabelled Data***



Siddhardhan

# Unsupervised Learning

Siddhardha

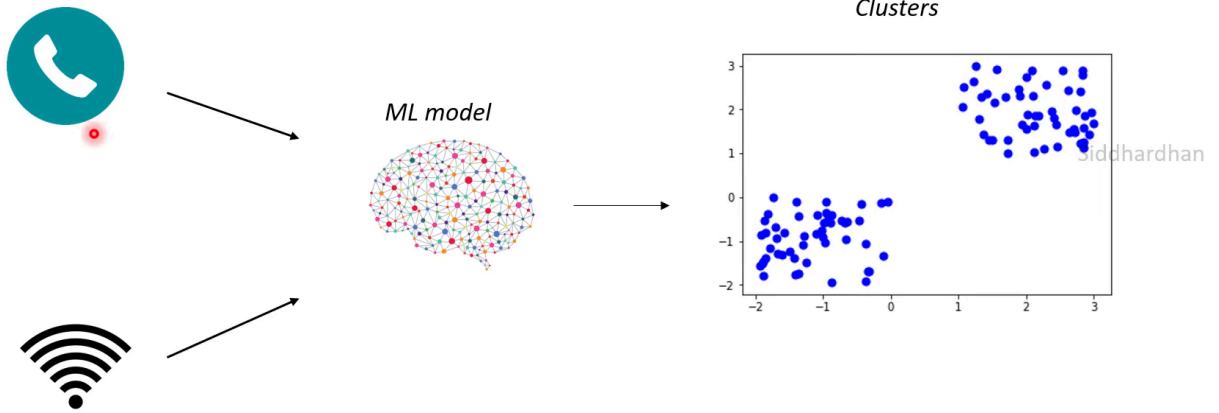
## Clustering

Clustering is an unsupervised task which involves grouping the similar data points.

## Association

Association is an unsupervised task that is used to find important relationship between data points

## Clustering



## Association

Customer 1



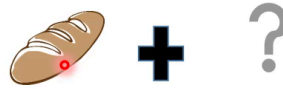
- Bread
- Milk
- Fruits
- wheat

Customer 2



- Bread
- Milk
- Rice
- Butter

Customer 3



Siddhardhan

Now, when customer 3 goes and buys bread, it is highly likely that he will also buy milk.

## Unsupervised Learning Models

1. K-Means Clustering
2. Hierarchical Clustering
3. Principal Component Analysis (PCA)
4. Apriori
5. Eclat

