

Decision Tree Learning

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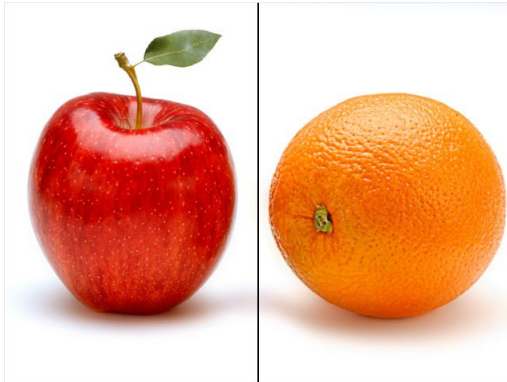
Who am I?

- **Reem Omer;**
- **Graduated from Sudan University of Science and Technology;**
- **Computer and Information Systems;**
- **A master student at AIMS;**
- **Machine Learning and Big Data.**



Example in Machine Learning:

Can you write a code to tell the difference between apples and oranges?

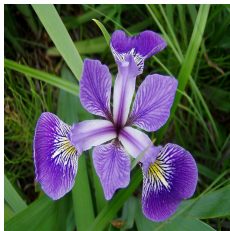


Iris Flower Data Set:

We have three types of Iris flower, and our goal is to identify type of flower.



Setosa



Versicolor



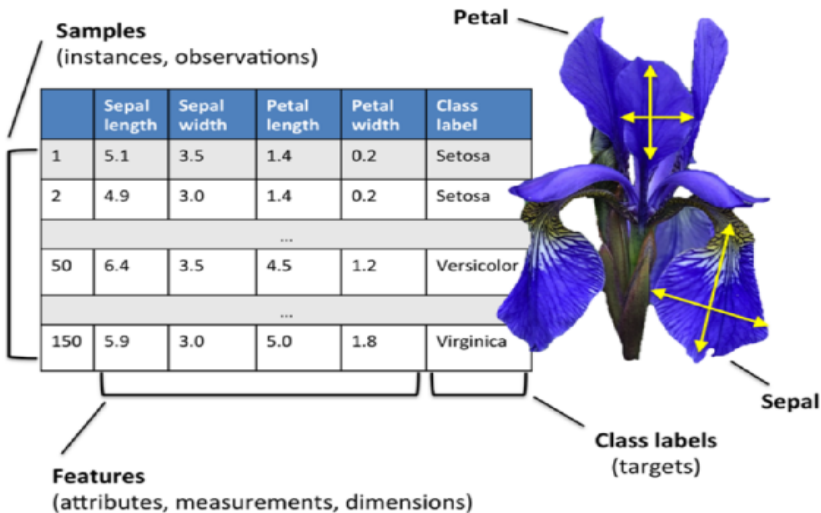
Virginica

Input \Rightarrow Analysis \Rightarrow Output

Rules of Classification:

- Color,
- Stalk,
- Sepal,
- Petal,
- ...

Features: Sepal (length, width) and Petal (length, width)



Classifier: is function that takes data as input and assign labels to it as output.

- To write classifier automatically is called supervised learning.
- Classifier finds the patterns in the input data.

Types of classifiers:

- Artificial Neural Networks;
- Support Vector Machine;
- Decision Tree;
- ...



Decision Tree

