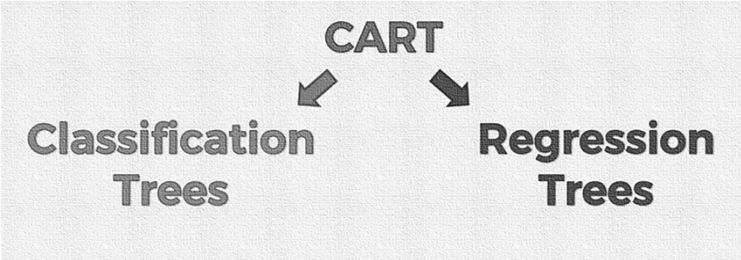
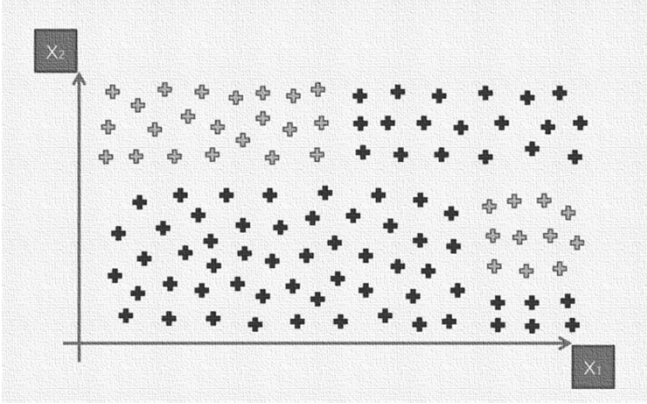
# CLASSIFICATION TREE

Mohan M J

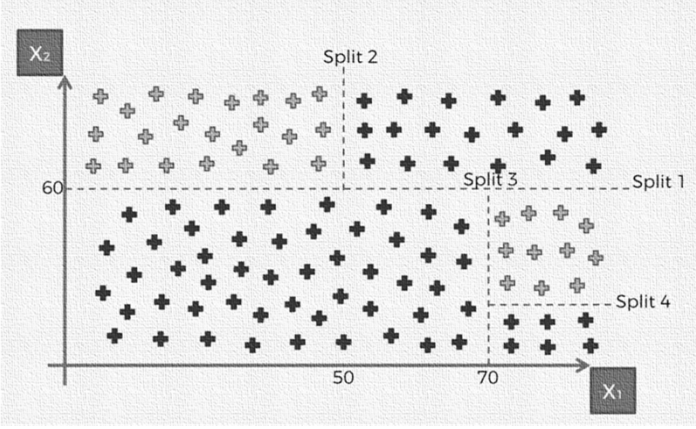
## INTUITION



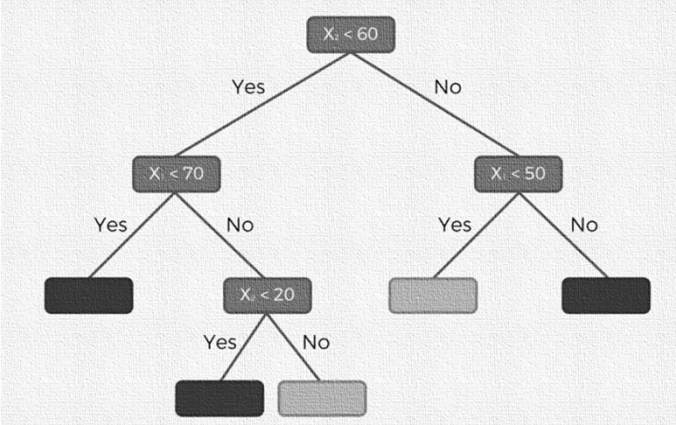
# CONTD..




# SPLIT THE DATASET



# DECISION TREE




# ENTROPY

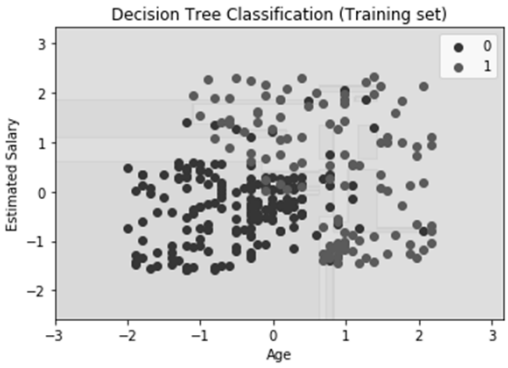
- We need to compare the degree of impurity of the parent with degree of the impurity of the child nodes before and after splitting.
- The larger their difference, the better
- **Entropy** is degree of randomness of elements or in other words it is ***measure of impurity.***

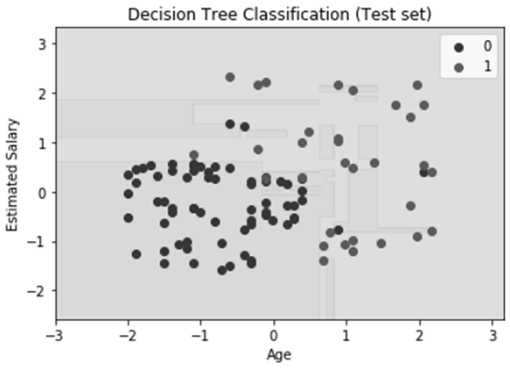
$$H = -\sum p(x) \log p(x)$$

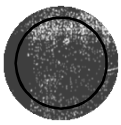
# PYTHON CODE

```
# Fitting Decision Tree Classification to the Training set
from sklearn.tree import DecisionTreeClassifier
classifier = DecisionTreeClassifier(criterion = 'entropy',
random_state = 0)
classifier.fit(X_train, y_train)
```

# VISUALIZE





# THANK YOU