

INTRODUCTION

The aim of our project is to predict the value of the '**play**' attribute in the

'weather'

dataset.

Our project

uses the J48

classifier of the

WEKA library to

build a decision

tree and

predict the
values of the
'play' attribute
of the dataset.
In the following
paragraphs ,
we describe
some basic

terms related
to our project.

MACHINE LEARNING:

Machine
learning is a
scientific
discipline that

deals with the construction and study of algorithms that can learn from data. Such algorithms operate by building a

model based
on inputs and
using that to
make
predictions or
decisions,
rather than
following only
explicitly

programmed
instructions. There are many
real world
examples of
machine
learning like
pattern
recognition, bio

metric
verification, speech
recognition
etc. There are
different types
of machine
learning.

1. Classification:

classifying
different
objects into
certain classes
they belong
to. It is also
known as
supervised
learning

because the
classes are
known ahead of
time.

2. Clustering:

This is
unsupervised
learning

because the
size and shape
of clusters is
not known to
us.

3.Recommenda
tion:Recommen
d a value for an

item on the
basis of past
behaviour of
things related
to it.

Inorder to
implement
machine

learning using
a programming
language the
first thing we
need is a
dataset
containing
objects and
their

attributes. Then
we need to
write a function
or code which
will train and
learn from the
dataset and
certain
algorithms

included in the
libraries.

The function
separates our
data into
training data
ad test data
which is called

as split cross
validation
method.

Once a good
number of
training data is
fed to our
function it then

takes as input a new set of data called as future data or unseen data and tries to predict or approximate.
The prediction

or
approximation is
not ideal
ofcourse. It
includes errors
and the
calculation of
this error is
also a

fundamental
process in
machine
learning.

Error is
calculated
using error
function or loss

function

(please refer to
the pdf for
details.

WEKA:Weka
stands for
Waikato
Environment

for Knowledge
analysis. It is a
library for
machine
learning which
contains many
algorithms and
classes which
are very

essential and
helpful in
writing
machine
learning
functions. It has
to the ability to
process
datasets in the

proper format
required.

CLASSIFIER: A
classifier is the
implementation
of a machine
learning
algorithms

which is
learned by the
machine using
the training
data fed from a
given dataset.

