

# Weka 3.6 Introduction<sup>1</sup>

## What is WEKA?

Waikato Environment for Knowledge Analysis is a data mining/machine learning tool developed by Department of Computer Science, University of Waikato, New Zealand. Weka is also a bird found only on the islands of New Zealand.

WEKA support multiple platforms (written in java): Windows, Mac OS X and Linux

## Download and Install

Website: <http://www.cs.waikato.ac.nz/~ml/weka/>

## Main Features

- 49 data preprocessing tools
- 76 classification/regression algorithms
- 8 clustering algorithms
- 3 algorithms for finding association rules
- 15 attribute/subset evaluators + 10 search algorithms for feature selection

## Documentation

If you could not follow the live demo in the lecture, You can find extensive documentation at <http://www.cs.waikato.ac.nz/ml/weka/documentation.html>

It contains presentation slides about WEKA interfaces and other features. You should have a look at the following topics mainly.

### *Data*

ARFF files, CVS (relation, attributes)

### *The Explorer*

Graphical User Interface

### *Preprocess data*

Using filters for cleaning, transformation and removing noise from the data. Performing preprocessing steps such as discretization, binary transformation etc.

### *Classification*

Learning Decision Trees such as ID3(does not handle continuous data), J48 (which handles real values also), generation of the tree and transformation of it into rules.

For the use of WEKA you could have a look at the video from Brandon Weinberg. IT starts with an introduction into the explorer. From 12:40 it shows classification with J48- Or look at tutorials in YouTube, e.g <https://www.youtube.com/watch?v=tIBf2FpXGeY&nohtml5=False>

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<sup>1</sup> Thanks fo Nadeem Qaisar Mehmood from University of Camerino

