**Weka**

Waikato Environment for Knowledge Analysis (Weka) is a suite of [machine learning](https://en.wikipedia.org/wiki/Machine_learning) software written in [Java](https://en.wikipedia.org/wiki/Java_(programming_language)), developed at the [University of Waikato](https://en.wikipedia.org/wiki/University_of_Waikato), [New Zealand](https://en.wikipedia.org/wiki/New_Zealand). It is [free software](https://en.wikipedia.org/wiki/Free_software) licensed under the [GNU General Public License](https://en.wikipedia.org/wiki/GNU_General_Public_License).

<https://en.wikipedia.org/wiki/Weka_(machine_learning)>

**Association**

In Statistics, association tells you whether two [variables](http://www.statisticshowto.com/variable/) are related. The direction of the association is always symbolized by a sign either positive (+) or negative (-).

<http://www.statisticshowto.com/direction-of-association/>

**Clustering**

Cluster analysis or clustering is the task of grouping a set of objects in such a way that objects in the same group (called a cluster) are more similar (in some sense) to each other than to those in other groups (clusters). It is a main task of exploratory [data mining](https://en.wikipedia.org/wiki/Data_mining), and a common technique for [statistical](https://en.wikipedia.org/wiki/Statistics) [data analysis](https://en.wikipedia.org/wiki/Data_analysis), used in many fields, including [machine learning](https://en.wikipedia.org/wiki/Machine_learning), [pattern recognition](https://en.wikipedia.org/wiki/Pattern_recognition), [image analysis](https://en.wikipedia.org/wiki/Image_analysis), [information retrieval](https://en.wikipedia.org/wiki/Information_retrieval), [bioinformatics](https://en.wikipedia.org/wiki/Bioinformatics), [data compression](https://en.wikipedia.org/wiki/Data_compression), and [computer graphics](https://en.wikipedia.org/wiki/Computer_graphics).

<https://en.wikipedia.org/wiki/Cluster_analysis>

**Classification**

In [machine learning](https://en.wikipedia.org/wiki/Machine_learning) and [statistics](https://en.wikipedia.org/wiki/Statistics), classification is the problem of identifying to which of a set of [categories](https://en.wikipedia.org/wiki/Categorical_data) (sub-populations) a new [observation](https://en.wikipedia.org/wiki/Observation) belongs, on the basis of a [training set](https://en.wikipedia.org/wiki/Training_set) of data containing observations (or instances) whose category membership is known. An example would be assigning a given email into ["spam" or "non-spam"](https://en.wikipedia.org/wiki/Spam_filtering) classes or assigning a diagnosis to a given patient as described by observed characteristics of the patient (gender, blood pressure, presence or absence of certain symptoms, etc.). Classification is an example of [pattern recognition](https://en.wikipedia.org/wiki/Pattern_recognition).

<https://en.wikipedia.org/wiki/Statistical_classification>

**Regression**

In [statistical modeling](https://en.wikipedia.org/wiki/Statistical_model), regression analysis is a set of statistical processes for estimating the relationships among variables. It includes many techniques for modeling and analyzing several variables, when the focus is on the relationship between a [dependent variable](https://en.wikipedia.org/wiki/Dependent_variable) and one or more [independent variables](https://en.wikipedia.org/wiki/Independent_variable) (or 'predictors'). More specifically, regression analysis helps one understand how the typical value of the dependent variable (or 'criterion variable') changes when any one of the independent variables is varied, while the other independent variables are held fixed.

<https://en.wikipedia.org/wiki/Regression_analysis>

**Difference between classification and clustering**

<https://stackoverflow.com/questions/5064928/difference-between-classification-and-clustering-in-data-mining>

**Weka Documentation**

<https://kent.dl.sourceforge.net/project/weka/documentation/>

<https://sourceforge.net/projects/weka/files/documentation/>

<http://weka.sourceforge.net/doc.stable-3-8/>

<http://weka.sourceforge.net/doc.dev/>

**Weka Tools Tutorials**

<https://www.youtube.com/watch?v=TF1yh5PKaqI>

<https://www.youtube.com/playlist?list=PLJbE6j2EG1pZnBhOg3_Rb63WLCprtyJag>

<https://machinelearningmastery.com/how-to-run-your-first-classifier-in-weka/> <https://www.ibm.com/developerworks/library/bd-javaweka/index.html>

**Weka API Tutorials And Code Samples**

<https://www.youtube.com/watch?v=6o19TPn181g&list=PLea0WJq13cnBVfsPVNyRAus2NK-KhCuzJ>

<https://www.youtube.com/watch?v=uQFKBCZsnHY>

<https://www.youtube.com/watch?v=guf93Gq3wAI>

<https://www.youtube.com/watch?v=QdoBHuXQc-0>

<https://www.youtube.com/watch?v=HrixTPMOCD4>

<https://weka.wikispaces.com/Use+WEKA+in+your+Java+code>

<https://weka.wikispaces.com/Programmatic+Use>

<http://www.emaraic.com/blog/weka-java-example>

<https://github.com/adementyev/WEKA-example>

<https://github.com/shuchengc/weka-example>

**Examples of .arff files**

<https://www.cs.auckland.ac.nz/~pat/weka/>