

## Experiment :- 01

- Objective:- Installation of Weka tool. and Investigation the Application interfaces of the weka tool.
- Introduction:- Weka is a Workbench that contains a collection of Visualization tools and algorithm for data analysis and predictive Modeling, together with graphical user interfaces for easy access to these functions.

There are four options available on the initial screen:-

- 1) Explorer:- The graphical interface used to conduct experimentation on raw data. After clicking the explorer button the weka explorer interface appears.

Inside the weka explorer window there are five tasks:-

→ File :- used to choose the data file to be used by the application.

Open File:- allow for the user to select files residing on the local machine or recorded Medium.

Open URL:- provides a Mechanism to recall a file or data source from a different location specified by user.

Open Database:- Allow the user to retrieve files or data from a database source provided by user.

→ Classify:- used to test and train different learning schemas on the preprocessed data file under experimentation.

→ Cluster:- used to apply different tools that identify clusters within the data file.

→ Association:- used to apply different rules to the data file that identify association within the data.

→ Select attribute:- used to apply different rules to several changes based on selected attribute inclusion or exclusion from the experiment.

→ Visualize:- used to see what the various manipulation produced on the dataset in a 2D format, in scatter plot and bar graph output.

2 Experimenten:- This option allows user to conduct different experimental variations on a dataset and perform statistical Manipulation.

→ ~~Result destination~~

→ ~~Experiment Type~~

→ ~~Iteration control~~

→ ~~Algorithm~~

3 Knowledge flows:- Basically the same functionality as Explorer with drag and drop functionality.

4 Simple CLI:- provides user without graphic interface option the ability to execute commands from a terminal window.

• Viva Questions:-

Q1 How Can weka be significant tool for Data analysis?

→ weka is a powerful open-source tool for data analysis and Machine Learning, offering a user-friendly interface and a wide range of algorithm for classification, clustering, regression and more. It support data preprocessing, Visualization and Model Evaluation Making it ideal for exploring and analyzing datasets.

Q2 What are the constraints of weka?

- Scalability: weka struggle with
- Memory intensive
- file format dependency
- algorithm limitation
- lack of real-time processing

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Q3

List 5 applications of weka software?

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5 application of weka are:-

- ① data preprocessing
- ② Classification and prediction
- ③ Clustering analysis
- ④ Association rule mining
- ⑤ Educational research purpose.

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