

How to use rasterMiner

Outline

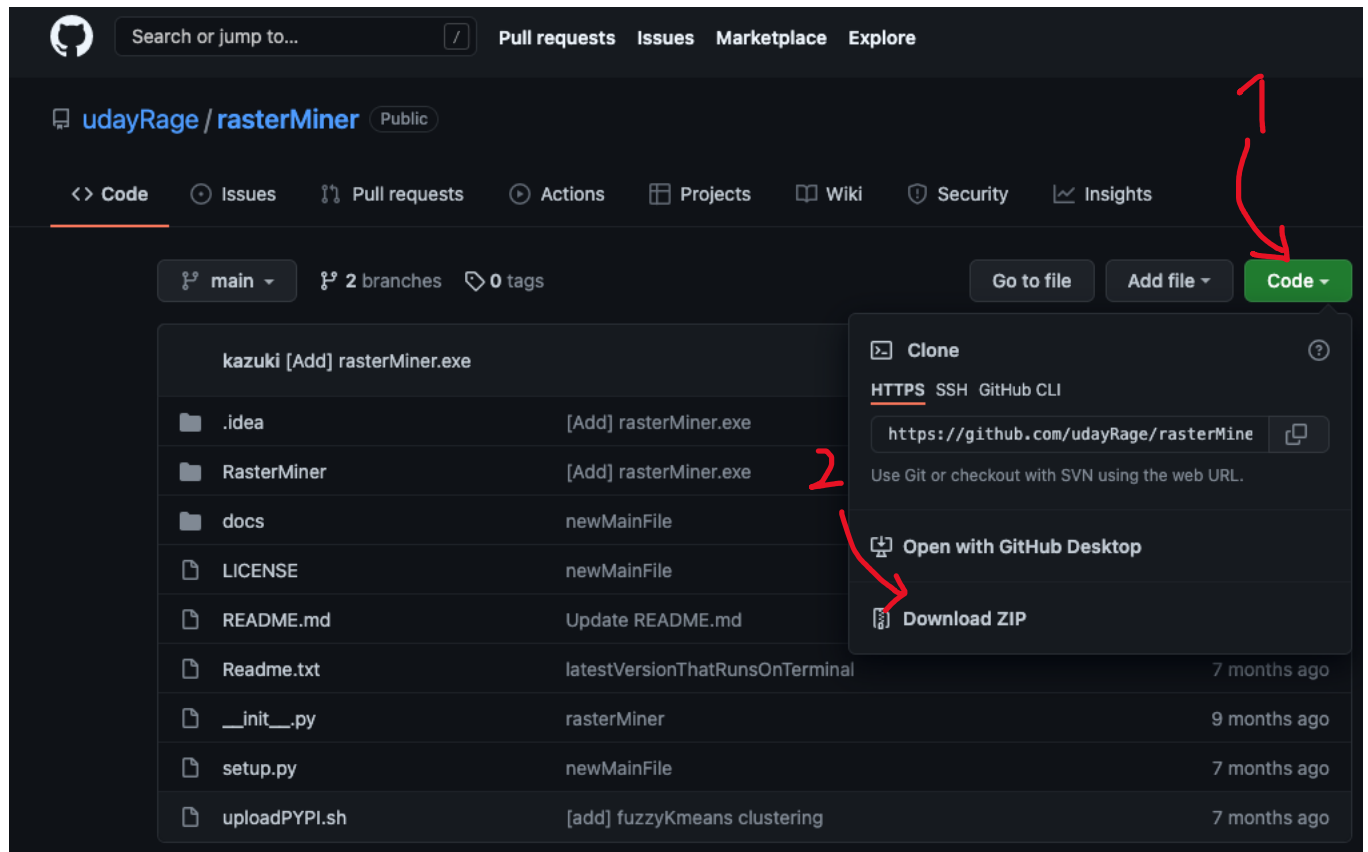
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Classification(Not completed)	
Prediction(Not completed)	

How to install RasterMiner

follow either of the two installation methods below.

1. Go to the following GitHub link

<https://github.com/udayRage/rasterMiner>



2. clone the rasterMiner in terminal

git clone <https://github.com/udayRage/rasterMiner.git>

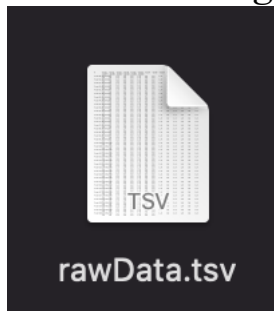
Convert RasterData to tsv file

1. Create the TSV file from multi-band images or single images.

The screenshot shows the RasterMiner web interface. At the top, there are tabs for 'Pattern Mining', 'Clustering', 'Classification', and 'Prediction'. Below these, there are sub-tabs for 'single-band temporal images' and 'handling NaN values'. The main form has the following fields:

- 'Select the folder containing raster files:' with a text input field.
- 'Enter the file extension of the raster files:' with a text input field. A blue callout bubble points to this field with the text 'Example for file extension. (lbl, img...)'. Below this field is a 'Browse' button.
- 'Select output folder:' with a text input field and a 'Browse' button.
- 'Initial band number' with a text input field.
- 'Final band number' with a text input field.
- A 'submit' button at the bottom left.

The following files are generated under the specified directory.



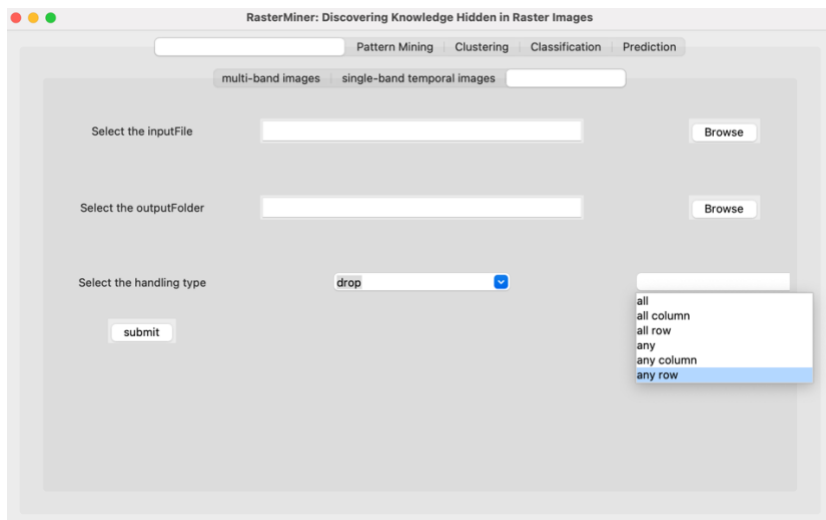
2. Handling Nan value (Delete and replace missing values.)

The screenshot shows the RasterMiner web interface. At the top, there are tabs for 'Pattern Mining', 'Clustering', 'Classification', and 'Prediction'. Below these, there are sub-tabs for 'multi-band images' and 'single-band temporal images'. The main form has the following fields:

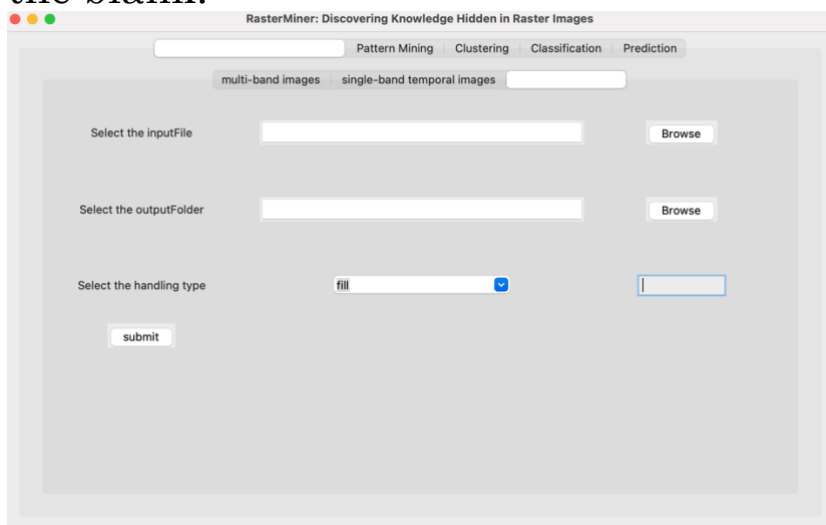
- 'Select the inputFile' with a text input field and a 'Browse' button. A blue callout bubble points to this field with the text 'Specify the location of the file(rawData) generated in 1.'.
- 'Select the outputFolder' with a text input field and a 'Browse' button.
- 'Select the handling type' with a dropdown menu. The dropdown menu is open, showing 'drop' and 'fill' options. A blue callout bubble points to the dropdown menu with the text 'Select drop or fill handling type.'.
- A 'submit' button at the bottom left.

In DROP type, the following types are available.

- 'any' : If any NA values are present, drop that row or column.
- 'all' : If all values are NA, drop that row or column.



The FILL type replaces the NA value with the number you put in the blank.



The following files are generated.



Pattern Mining

Temporal and neighborhood files can be created from spatial data.

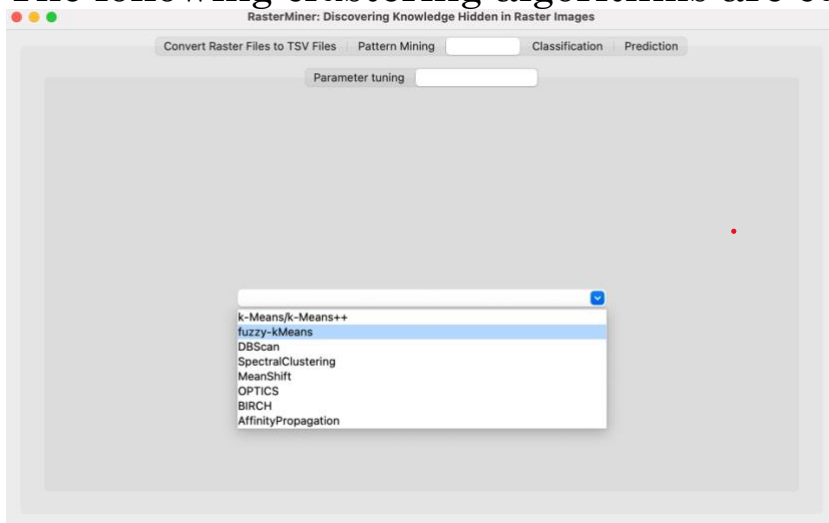
The image shows two side-by-side web forms for pattern mining. The left form is for 'Temporal File' and the right is for 'Neighborhood File'. Both forms have tabs for 'Convert Raster Files to TSV Files', 'Clustering', 'Classification', and 'Prediction'. The 'Temporal File' form has fields for 'Select the file:', 'Select output folder:', and 'threshold', with 'Browse' buttons and a 'submit' button. The 'Neighborhood File' form has fields for 'input file', 'output folder', 'condition', and 'threshold', with 'Browse' buttons, a dropdown for 'condition', and a 'submit' button.

The following are available pattern mining algorithms

The image shows a web form for selecting a pattern mining algorithm. It has tabs for 'Convert Raster Files to TSV Files', 'Clustering', 'Classification', and 'Prediction'. Below the tabs are 'Temporal File' and 'Neighborhood File' tabs. The main area has a label 'select the algorithm' and a dropdown menu with three options: 'Periodic-frequent Pattern', 'Partial-periodic Pattern', and 'Frequent-spatial Pattern'. A 'submit' button is at the bottom left.

Clustering

The following clustering algorithms are currently available.



This is a screen shot of the kMeans algorithm.

You can browse "help" for more information on the parameters.

