

# AN APPROACH TO SOLVE CLASSIFICATION PROBLEM

The general architecture of the web application is as follows :



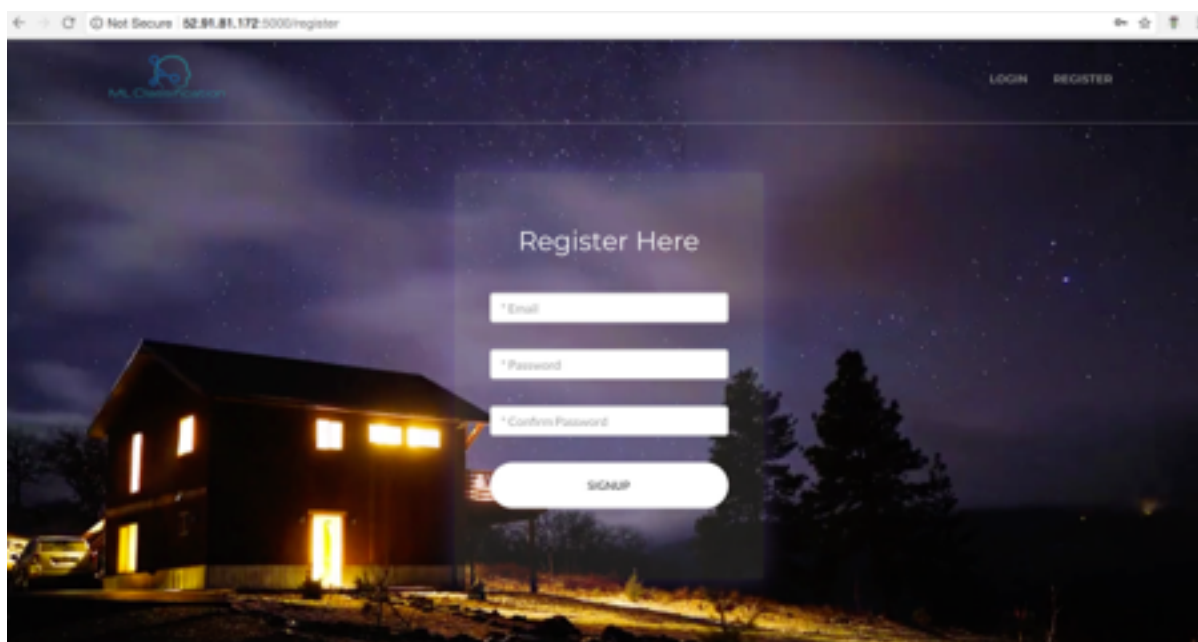
## User Documentation:

We have attempted to solve the classification problem through the ML algorithm. This user friendly and easy to use application along with being extremely time efficient, efficiently solves the classification problem.

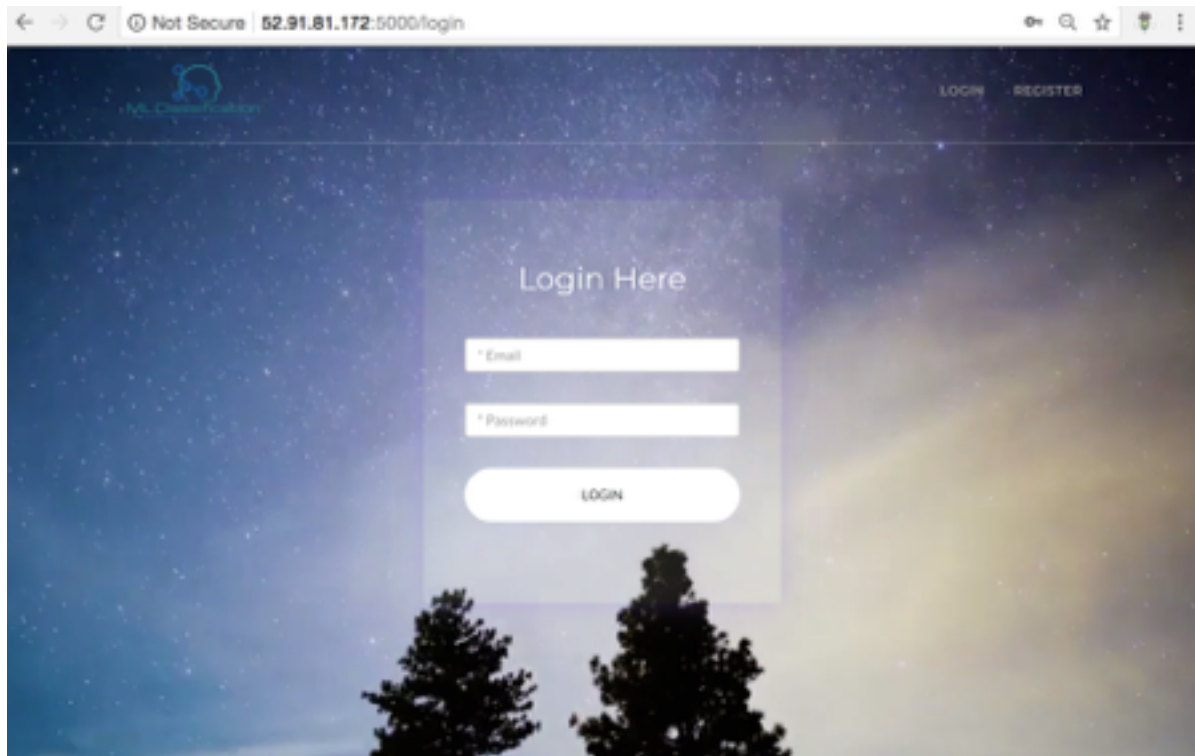
You can get a general idea regarding ml using the videos provided in the website.



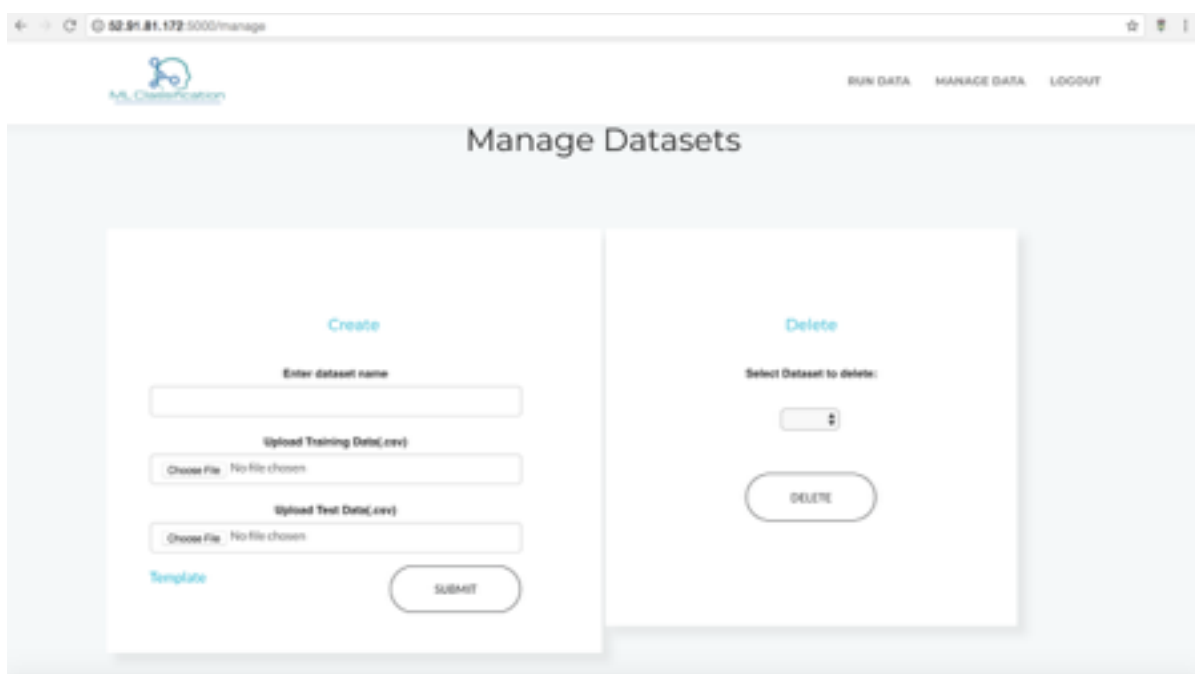
Register yourself if you are using the website for the first time.



After registering yourself you can login into the website



After logging in, you can go to MANAGE DATA and add any datasets(training data and test data) you want. You can also delete them. You can use these datasets for training the machine.



Once you have done this, you can go to RUN DATA and select a dataset and algorithms and run to begin the classification.

The screenshot shows the 'Run Data' page of the ML Classification application. At the top, there is a navigation bar with the application logo and links for 'RUN DATA', 'MANAGE DATA', and 'LOGOUT'. The main content area has a title 'Run Data'. Below the title, there are two dropdown menus: 'Select Dataset' with '0' selected and 'Select Algorithm' with 'Knn(1nn)' selected. To the right of these dropdowns are two buttons: 'DOWNLOAD TRAINING' and 'DOWNLOAD TEST'. At the bottom right of the form is a 'RUN' button.

After the Machine is trained using the training data, it classifies the test data into respective classes. You can download the results.

The screenshot shows the 'Results' page of the ML Classification application. At the top, there is a navigation bar with the application logo and links for 'RUN DATA', 'MANAGE DATA', and 'LOGOUT'. The main content area has a title 'Results'. Below the title, there are two links: 'Dataset: iris' and 'Algorithm: knn'. Below these links is a table with 5 columns: 'sepal\_length', 'sepal\_width', 'petal\_length', 'petal\_width', and 'species'. The table contains 15 rows of data. At the bottom right of the table is a 'Download Result' link.

sepal_length	sepal_width	petal_length	petal_width	species
4.8	3.0	1.4	0.1	setosa
5.1	3.8	1.6	0.2	setosa
4.6	3.2	1.4	0.2	setosa
5.3	3.7	1.5	0.2	setosa
5.0	3.3	1.4	0.2	setosa
7.0	3.2	4.7	1.4	versicolor
4.4	3.2	4.5	1.5	versicolor
6.9	3.1	4.9	1.5	versicolor
5.5	2.3	4.0	1.3	versicolor
6.5	2.8	4.6	1.5	versicolor
5.7	2.8	4.5	1.3	versicolor
5.8	2.8	5.1	2.4	virginica
6.4	3.2	5.3	2.3	virginica
6.5	3.0	5.5	1.8	virginica
7.7	3.8	6.7	2.2	virginica
7.7	2.6	6.9	2.3	virginica

A sample template can be viewed in [Data Template](#) .

template.PNG (582x810)

34.229.211.235:5000/static/template.PNG

Training Data Template (.csv)

	normal_length	normal_width	normal_height	normal_weight	Classification
1	10.0	10.0	10.0	10.0	0.0 positive
2	10.0	10.0	10.0	10.0	0.0 positive
3	10.0	10.0	10.0	10.0	0.0 positive
4	10.0	10.0	10.0	10.0	0.0 positive
5	10.0	10.0	10.0	10.0	0.0 positive
6	10.0	10.0	10.0	10.0	0.0 positive
7	10.0	10.0	10.0	10.0	0.0 positive
8	10.0	10.0	10.0	10.0	0.0 positive
9	10.0	10.0	10.0	10.0	0.0 positive
10	10.0	10.0	10.0	10.0	0.0 positive
11	10.0	10.0	10.0	10.0	0.0 positive
12	10.0	10.0	10.0	10.0	0.0 positive
13	10.0	10.0	10.0	10.0	0.0 positive
14	10.0	10.0	10.0	10.0	0.0 positive
15	10.0	10.0	10.0	10.0	0.0 positive
16	10.0	10.0	10.0	10.0	0.0 positive
17	10.0	10.0	10.0	10.0	0.0 positive
18	10.0	10.0	10.0	10.0	0.0 positive
19	10.0	10.0	10.0	10.0	0.0 positive
20	10.0	10.0	10.0	10.0	0.0 positive

Test Data Template (.csv)

	normal_length	normal_width	normal_height	normal_weight	Classification
1	10.0	10.0	10.0	10.0	0.0 positive
2	10.0	10.0	10.0	10.0	0.0 positive
3	10.0	10.0	10.0	10.0	0.0 positive
4	10.0	10.0	10.0	10.0	0.0 positive
5	10.0	10.0	10.0	10.0	0.0 positive
6	10.0	10.0	10.0	10.0	0.0 positive
7	10.0	10.0	10.0	10.0	0.0 positive
8	10.0	10.0	10.0	10.0	0.0 positive
9	10.0	10.0	10.0	10.0	0.0 positive
10	10.0	10.0	10.0	10.0	0.0 positive
11	10.0	10.0	10.0	10.0	0.0 positive
12	10.0	10.0	10.0	10.0	0.0 positive
13	10.0	10.0	10.0	10.0	0.0 positive
14	10.0	10.0	10.0	10.0	0.0 positive
15	10.0	10.0	10.0	10.0	0.0 positive
16	10.0	10.0	10.0	10.0	0.0 positive
17	10.0	10.0	10.0	10.0	0.0 positive
18	10.0	10.0	10.0	10.0	0.0 positive
19	10.0	10.0	10.0	10.0	0.0 positive
20	10.0	10.0	10.0	10.0	0.0 positive

Annotations:

- Attributes (normal\_length, normal\_width, normal\_height, normal\_weight)
- Classification
- Data values either Numeric or Categorical
- Attributes (must match Training Data Attributes)
- No classification required