

Technology : Machine Learning  
Domain : Industrial Automation  
Project : Automated ML

# Wireframe Document

## Automated ML

### Document Version Control

Date Issued	Version	Description	Author
16-Aug-2021	1	Wireframe Document - V1.0	Bharadwaja,Bhagyasree



# Abstract

Automated machine learning (AutoML) helps to lower the barrier to entry for machine learning model building by streamlining the process thereby allowing non-technical users to harness the power of machine learning.

Automated machine learning (AutoML) is the process of automating the time consuming, iterative tasks of machine learning. It allows data scientists and analysts to build machine learning models with efficiency while sustaining the model quality. The final goal of any AutoML solution is to finalize the best model based on some performance criteria.

Traditional machine learning model development process is resource-intensive, requiring significant domain knowledge and time to produce and compare dozens of models. So we build an automated machine learning, where you will accelerate the time it takes to get production-ready ML models with great ease and efficiency.

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## 1. Home Page

Automated ML Home page is divided into Three sections

- Automated ML Logo
- Input section
- output section

The diagram illustrates the layout of the Automated ML Home Page. It is enclosed in a large black rectangular border. At the top center, there is a white rectangular box with a black border containing the text *Image or Logo* in red. Below this, the page is divided into two main sections. On the left, there is a white rectangular box with a black border containing four input fields and a button. The first two fields are labeled *Type\_of\_dataset* and *Type\_of\_Problem*, each followed by a small rectangular input box. Below these are two more fields labeled *Output column name* and *Dataset path*, each followed by a larger rectangular input box. At the bottom of this section is a blue rectangular button with the text *Get Best Model* in blue. On the right, there is a white rectangular box with a black border containing the title *Results* in bold black text. Below the title is a table with 4 columns and 6 rows, outlined in blue.

**Fig. 1.** Homepage

## 2. Input Section

Automated ML Input section is divided into Four Fields

- Type of Dataset
- Type of Problem
- Output column
- Dataset File path

## 2.1 Type of Dataset

The Automated ML system should be able to read datasets in various file formats such as csv , xlsx , json , tsv , HTML and txt. Integrating a drop down menu would help us to achieve.

**Type of Dataset :**

<b>csv</b>	✓
<b>xlsx</b>	
<b>json</b>	
<b>tsv</b>	
<b>html</b>	
<b>txt</b>	

**Fig. 2.** type of dataset

## 2.2 Type of Problem

The Automated ML system will be able to solve various problems such

- Regression
- Classification
- Clustering

Integrating a drop down menu would help us to achieve.

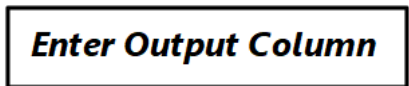
**Type of Problem :**

<b>Regression</b>	✓
<b>Classification</b>	
<b>Clustering</b>	

**Fig. 3.** type of problem

### 2.3 Output column

For Supervised problems such as Regression and Classification , output column will act as teachers input which to help our model to learn and predict the output correctly. So it is required to specify output column. So single line text input field would help us to achieve.

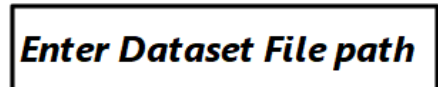


***Enter Output Column***

**Fig. 4.** output column

### 2.4 Dataset File path

To perform any task using Automated ML task we need to give input. So single line text input field would help us to achieve , where the user can give Dataset File path or Link.



***Enter Dataset File path***

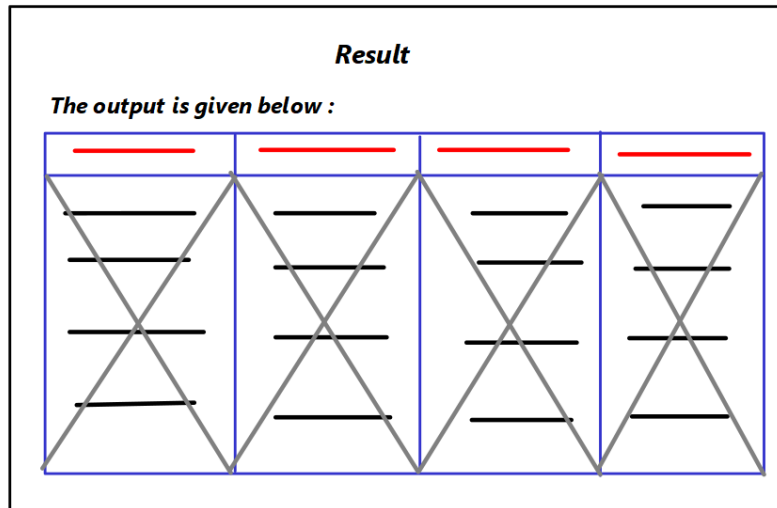
**Fig. 5.** File path

## 3. Result Section

Result section displays the output in form of table, where user can compare the results of various models and can download the model of his choice. It is the section where the error are displayed while exception handling. The following should be displayed in the result section

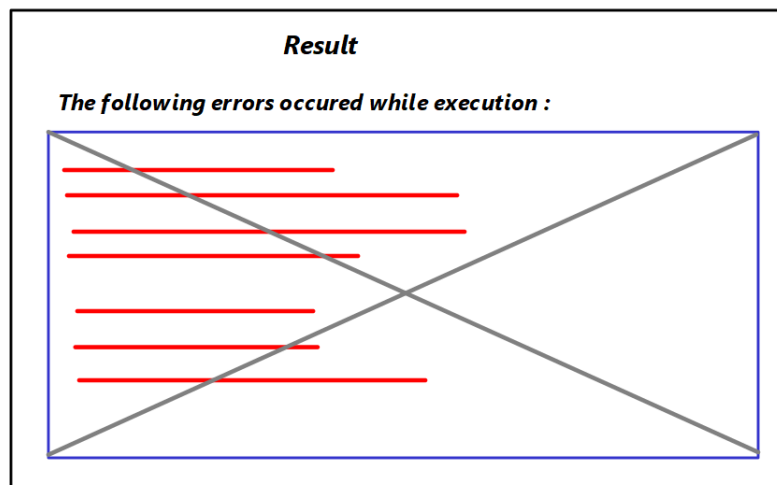
- Performance measures
- Model download link and Recommendations
- Errors while exception handling

### 3.1 Result:Output



**Fig. 6.** result:Output

### 3.2 Result:Error



**Fig. 7.** result:Error