Image Labelling Tool for Classification

# Introduction

This project has 9 PHP files, which serve as the backend for the project, and 1 CSS file, which can have some changes made to it for beautification.

For processing PHP files, it needs to be opened on a server. For the purposes of this project, I had installed the XAMP Stack, which has cross platform support, so it can be used both in Windows and Linux.

# Installation Requirements

Minimum Requirements: Apache, MySQL, PHP.

Recommended Requirements: XAMPP Stack

For Windows, refer <https://pureinfotech.com/install-xampp-windows-10/>

For Linux, execute the following commands with sudo access.

wget https://www.apachefriends.org/xampp-files/5.6.20/xampp-linux-x64-5.6.20-0-installer.run

sudo su

chmod +x xampp-linux-x64-5.6.20-0-installer.run

./xampp-linux-x64-5.6.20-0-installer.run

# TNeGA Details

The tool is installed in the **label\_server** user. Password is **tnega@1234**.

It is currently running on the URL name “**wordpress.localhost**”.

To change the URL name, just edit the **hosts** file present in the **etc** folder of root, and replace wordpress.localhost with any name you wish to assign.

# Directory Structure

Directory Structure: To minimize human interaction of changing the Document Root on config files of Apache, a default directory structure can be used where users can copy their files and use the tool.

For labelling a set of folders, Copy all the folders in the "images" folder.

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NOTE: Only those images will be labelled in the individual images section, which are directly placed in the "images" folder (not in any subfolder). This has been done to prevent confusion of the pictures being labelled.

# Back-end Information

## PHP Functioning-

**Index.php - Homepage**

### On Click-

Start/Resume Labelling a Set of folders opens **main.php**

Start/Resume Labelling Individual Files opens **file.php**

View Current Records opens **view.php**

Edit Existing Records opens **edit.php**

Delete Existing Records opens **delete.php**

Add Custom Labels opens **custom.php**

Export Current Records as CSV executes **sqltocsv.php**

### Basic Back-End Working-

1. Start Labelling a Set of folders/Individual Files sets SESSION variable folder/file to 0, hence starts from scratch.

1. Resume Labelling a Set of Folders/Individual Files extracts SESSION Variable folder/file from the 'resume' table in the database, and resumes from the respective SESSION variable.
2. The Go Home option in each of those views saves the resume state and goes back to index.php.
3. On Successful completion of required labellings, you are redirected to the done.php page which notifies you of your completion, and has the option to go home.
4. View Current Records extracts table data from the brain table and displays it. You have the option of exporting these records as CSV(redirects to sqltocsv.php) or going home(index.php) in this view.
5. Edit Existing Records gives you the option of manually editing each record with a custom entry, corresponding to the entered ID.
6. Delete Existing Records gives you, either the option to delete a particular entry , corresponding to the ID, or to delete all records. CAUTION! :Since the Delete All Records does not ask for confirmation, exercise the option with care.
7. Add Custom Labels allows you to change the current labels, by prompting the user with the number of labels, and dynamically generated textboxes(using JS) to store those labels, and the edits are stored in the label table.

## SQL Table Details:

1. Create a Database in your MySQL client.
2. Reflect that $dbname in all the php files. Default $dbname is sarkar.
3. Create 3 tables, brain, resume and labels.

### Table Schema:

1)brain: ID varchar(300), response varchar(300)

2)resume: type varchar(10), id varchar(300)

3)labels: ID(100), varchar(100)

* In the SQL queries, the tablenames have been hardcoded due to reasons of safety, to prevent any manual errors due to typos.
* On the occasion that the tablenames need to be changed, reflect the changes in the php files as well using find and replace.
* On the TNeGA server, the database name is label.
* Change the username and password variables in each php sql block in all php files accordingly. A working set up has already been done in the TNeGA user label\_server, with username label and password tnega@1234.

# Known Bugs

* On labelling a set of folders, the Go Home Button does not work on the first page. Works properly everywhere else.

# Contact Me

For any issues related to the tool, for any further opportunities, or to have a chat over coffee, please feel free to reach out to me.

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