

Phase 01: Database and Feature Generation

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In the command window of Matlab, type “help <file_name.m>” to see the header documentation of my program scripts.

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Note 1:

This folder have a sub-folder “CLP_Database” that contains all the Candidate License Plates (License Plate (LP) + non-License Plate (non-LP) images). The CLP database is created using the license plate detection algorithm (ALPD) and the database of 565 vehicle images from the article [1]. I didn’t add the vehicle image database and the implementation of ALPD algorithm from the article [1] (because it is not directly relate to this project and contains ten more files).

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Note 2:

This folder contains following main scripts. Go to Matlab Command Window and type the target main script (For example >> CLP_info) for execution.

- CLP_info.m
 - Read the main script header for more details.
 - This program will provide you some statistical information about the (Candidate License Plate) CLP database.
 - It generates a “txt” file named CLP_info_output.txt (in the current directory) that contains the outputs.
 - feature_gen.m
 - Read the main script header for more details.
 - This program extracts HOG features from all the images in the CLP_Database.
 - It generates following 6 “mat” files that contain the HOG features for three different resolutions (original, double and half) of LPs and Non-LPs.
 - * LP_1x.mat
 - * LP_2x.mat
 - * LP_hx.mat
 - * nonLP_1x.mat
 - * nonLP_2x.mat
 - * nonLP_hx.mat
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Note 3:

This folder contains following function script (You don't need to run it separately).

- `my_hog.m`
 - Read the function header for more details.
 - This function is used inside `feature_gen.m`.

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References

- [1] Azam, S., Islam, M. M., “Automatic license plate detection in hazardous condition,” Journal of Visual Communication and Image Representation, Elsevier, vol. 36, pp. 172-186, 2016.