

Packages used:

- **pickle, PIL, os, random** : used in the preparation of the input data
- **Numpy** : used in the calculation of features of the image

Instructions to run the code:

- Use the code file that is tagged as “project final version” in github.
- Training data is packed in pickle format in a file “**training_data.pkl**”. Place this file in the same directory as the Jupyter notebook.
- Testing data is packed in pickle format in a file “**testing_data.pkl**”. Place this file in the same directory as the Jupyter notebook.
- Run the cell that follows the heading “Building the model”. This will print results for 10 rounds. It uses empirical error by default. To use false_positive or false_negative as the criteria, uncomment the block in the “training()” method of Viola class and comment the block of code that follows it that uses the empirical error.