Documentation- Image Analysis Pclub Self Project

June 7, 2017

Team mambers- Abhinav Shukla, Raghukul Raman,Sudhanshu Jaiswal,Tushar Gurjar, Vibhor Porwal, Amartya Prusty

1 Introduction

It is a self project under pclub. The main objective of the project is to analyse a image and extract features of the image. We will extract features like text in the image at any location and face detection which will locate faces in the image.

2 Implementation Details

Initially we will be working on text retrival from the image. This will involve text detection in image at different location, then character segementation and finally character recognition using some machine learning algorithm.

3 Week1:20-5-17

1. Learned python by LPTHW and Codeacadamy. All sample files that were used for learning python are added to the github repositories.
2. Learned Commandine tutorials from Codeacedemy.
3. Learned Git from Codeacademy.
4. Learned important python libraries that will be used in project -Numpy, Scipy, Pickle and MatplotLib from http://cs231n.github.io/python-numpy-tutorial/ and other resources.
5. Started with Andrew Ng course and completed 3 weeks. Done with linear regression, logistic regression. from https://www.coursera.org/learn/machine-learning/home/welcome

4 Week2:

1. Understanding Machine learning idea and its implementation in our problem.
2. Continued Machine Learning from Coursera and completed till week 6 .
3. Done with concept of Neural Networks and its implementation.
4. Studied TensorFlow library for implementation of the above mentioned machine learning techniques from https://www.tensorflow.org/tutorials/

5 Week3:

1. Start working on letter classification using logistic regression (will implement using neural network for improving accuracy).
2. Wrote code for A-J letter classification. Working with 86 percent accuracy on test dataset.

*code for letter classification on github repository-
https://github.com/tushargr/PclubProject_ImageAnalysis