Documentation(Vibhor Porwal)-Image Analysis PClub Self Project

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1   Other Team Members

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2   Introduction

It is a self project under PClub. The main objective of the project is to analyse a image and extract featurs of the image. We will extract features like text in the image at any location and also try to locate human faces in the image.

3   Implementation Details

Initially we will be working on text retrieval from the image. This will involve text detection in image at different location, then character segmentation and finally character recogntion using some machine learning algorithm. Our Image analyser uses MSER for text detection in the image.It gives us the text regions but also some non text regions.The words are formed using geometrical constraints.The character is recognised using Convolutional Neural Network.

4 Week 1: 20-5-17

1. Learned Python from LPTHW

2. Learned the basics of git

3. Learned important python libraries that will be used in the project- Numpy, Scipy, Pickle and MatplotLib

4. Started the course on ML by Andrew Ng and done the basics of Linear regression

5 Week 2

1. Continued ML from Coursera and completed till Week 4

2. Done with the concept of logistic regression

6 Week 3

1. Studied tensor flow library for implementation of above techniques

2. Completed till Week 6 of Andrew Ng's course

7 Week 4

1. Completed till Week 8 of Andrew Ng's Course

2. Searched about different techniques for text detection

3. Decided to use MSER

8 Week 5

1. Completed till Week 9 of Andrew Ng's course

2. Started learning Keras

3. Tested our code for detecting individual character regions on char74k EnglishFnt Dataset with 88 percent accuracy

9 Week 6

1. Learned about Convolutional Neural Nets

2. Took the Keras tutorial