Dataset Introduction MPIIFaceGaze

File Structure

```
MPIIFaceGaze
     |
     |-Label
     |   |
     |   |-{subject}.label
     |
     |-Image
         |
         |-{subject}
                |-face
                |-left
                |-right
                   |-1.jpg
                   |-2.jpg
                   |   .
                   |   .
                   |   .
```

`.label` File Format

Each `.label` file contains the data of one subject. Each line contains the data of one image. The first line in `.label` file is the name of contained variables. Variables are separated by space. As for variables contain more than one value. values are separated by `,`.

- `Face` - `string` - Path of normalized face image relative to `../Image/` .
- `Left` - `string` - Path of normalized left eye image relative to `../Image/` .
- `Right` - `string` - Path of normalized right eye image relative to `../Image/` .
- `Origin` - `string` - Indicates the origin image
- `WhichEye` - `string` - Denote which eye is chosen in standard MPIIGaze evaluation sets.
- `3DGaze` - `(3,)` - Ground truth of normalized 3D gaze direction vector.
- `3DHead` - `(3,)` - Ground truth of normalized 3D head orientation vector.
- `2DGaze` - `(2,)` - Ground truth of normalized 2D gaze direction vector *i.e.* yaw and pitch.
- `2DHead` - `(2,)` - Ground truth of normalized 2D head orientation vector *i.e.* yaw and pitch.
- `Rmat` - `(3,)` - Rotation vector from original Camera Coordinate System (CCS) to the normalized CCS.
- `Smat` - `(3,)` - The diagonal elements of the scale matrix used in normalization procedure.
- `GazeOrigin` - `(3,)` - Origin of 3D gaze vector in normalized CCS.

Geting Start.

You could read the line in `.label` file for reading image data.

Assuming the root path is `/home/MPIIGaze`. You could:

```
import os
import cv2

# line; One line in `.label` file.
imroot = '/home/MPIIGaze'

face_path = os.path.join(imroot, 'Image', line.split(' ')[0])
left_path = os.path.join(imroot, 'Image', line.split(' ')[1])
right_path = os.path.join(imroot, 'Image', line.split(' ')[2])


face_image = cv2.imread(face_path)
left_image = cv2.imread(left_path)
right_image = cv2.imread(right_path)

label = line.strip().split(' ')[5].split(",")
label = np.array(label).astype('float')
```