DrivFace Data Set

Download: Data Folder, Data Set Description

Abstract: The DrivFace contains images sequences of subjects while driving in real scenarios. It is composed of 606 samples of 640Ã—480, acquired over different days from 4 drivers with several facial features.

Data Set Characteristics:	Multivariate	**Number of Instances:**	606	**Area:**	Computer
Attribute Characteristics:	Real	**Number of Attributes:**	6400	**Date Donated**	2016-05-26
Associated Tasks:	Classification, Regression, Clustering	**Missing Values?**	N/A	**Number of Web Hits:**	29755

Source:

Katerine Diaz-Chito*
Aura HernÃ¡ndez-SabatÃ©
Antonio M. LÃ³pez

Centre de VisiÃ³ per Computador
Universitat AutÃ³noma de Barcelona

*Corresponding author:{kdiaz '@' cvc.uab.es}

Data Set Information:

The DrivFace database contains images sequences of subjects while driving in real scenarios. It is composed of 606 samples of 640Ã—480 pixels each, acquired over different days from 4 drivers (2 women and 2 men) with several facial features like glasses and beard.

Additional files:
drivFace.mat contains the dataset in Matlab (under prtools library) with the driver faces normalised to 80x80 pixels each and their associated gaze direction labels â€œlooking-rightâ€, â€œfrontalâ€ and â€œlooking-leftâ€.

Attribute Information:

The ground truth contains the annotation of the face bounding box and the facial key points (eyes, nose and mouth).
A set of labels assigning each image into 3 possible gaze direction classes are given.
The first class is the â€œlooking-rightâ€ class and contains the head angles between -45Âº and -30Âº.
The second one is the â€œfrontalâ€ class and contains the head angles between -15Âº and 15Âº.
The last one is the â€œlooking-leftâ€ class and contains the head angles between 30Âº and 45Âº.

Files and scripts
â€¢ DrivImages.zip has the driver images. The imag's name has the format:
* YearMonthDay_subject_Driv_imNum_HeadPose.jpg

i.e. 20130529_01_Driv_011_f .jpg is a frame of the fisrts driver corresponding to the 11 sequence's image and the head pose is frontal.
subject = [1:4], imNum = [001:...], HeadPose = lr (looking-right), f (frontal) and lf (looking-left).

â€¢ drivPoints.txt contains the ground truth in table's format, where the columns have the follow information:
* fileName is the imagen's name into DrivImages.zip
* subject = [1:4]
* imgNum = int
* label = [1/2/3] (head pose class that corresponding to [lr/f/lf], respectively)
* ang = [-45, -30/ -15 0 15/ 30 15] (head pose angle)
* [xF yF wF hF] = face position
* [xRE yRE] = rigth eye position
* [xLE yL] = left eye position
* [xN yN] = Nose position
* [xRM yRM] = rigth corner of mouth
* [xLM yLM] = left corner of mouth

â€¢ read_drivPoints.m is a Matlab function to read the drivPoints file. You can also use:
* Table = readtable('drivPoints.txt');

â€¢ drivFace.mat contains the dataset in Matlab (under prtools library) with the driver faces normalised to 80x80 pixels each and their associated gaze direction labels â€œlooking-rightâ€, â€œfrontalâ€ and â€œlooking-leftâ€.

Relevant Papers:

Katerine Diaz-Chito, Aura HernÃ¡ndez-SabatÃ©, Antonio M. LÃ³pez, A reduced feature set for driver head pose estimation, Applied Soft Computing, Volume 45, August 2016, Pages 98-107, ISSN 1568-4946,

Citation Request:

Katerine Diaz-Chito, Aura HernÃ¡ndez-SabatÃ©, Antonio M. LÃ³pez, A reduced feature set for driver head pose estimation, Applied Soft Computing, Volume 45, August 2016, Pages 98-107, ISSN 1568-4946,