Fundamentals of Computer Vision

Project FCV **Marks 40** **Viva/Evaluation Week: 17th Week**

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   - Zero marks for first sharing infringement (both parties)
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INSTRUCTIONS

1) Configure OpenCV with jupyter notebook. No other IDE is allowed.
2) Also install the required libraries

Extend the assignment 4 question 2 and do as directed.

8-class Image Classification: Extract high-level features from pre-trained darknet19 and darknet53 models (deep features) and low-level features such as pHOG, color histogram feature (CHF), bit pattern histogram feature (BHF), and local extrema patterns (LEP). Then parallel fuse the deep features (max and average). Use linear discriminant analysis (LDA) and PCA for dimensionality reduction. Finally show the outcome with joint feature representation (serial fusion) and individual feature representations. Apply SVM classifier with kernel tricks which is commonly used for classification problems.

For reference, read this paper.

1. Pedestrian gender classification on imbalanced and small sample datasets using deep and traditional features
2. Person re-identification with features-based clustering and deep features