CSE341/541: Advanced Biometrics

Mid-Semester Exam Deadline: 10 March 2018

There are two questions in the mid-semester examination. In the first question, you all have to review/critique both the papers. In the second question, implement one face recognition algorithm using various technique from the list given below.

Q1. Papers to review/critique:

1. P. Sinha, B. Balas, Y. Ostrovsky, R. Russell, Face Recognition by Humans: 19 Results All Computer Vision Researchers Should Know About, Proceedings of the IEEE, Vol. 94, No. 11, November 2006, pp. 1948-1962
2. A. M. Martinez and A. C. Kak, "PCA versus LDA," in *IEEE Transactions on Pattern Analysis and Machine Intelligence*, vol. 23, no. 2, pp. 228-233, Feb 2001.

Q2. Face recognizer:

Build a face recognition algorithm using one of the following techniques: multiple layer Autoencoder, 2D Principal Component Analysis, and Self-Similarity Descriptor.

Papers for reference for Q2:

[1] Stacked Progressive Auto-Encoders (SPAE) for Face Recognition Across Poses (https://www.cv-foundation.org/openaccess/content_cvpr_2014/papers/Kan_Stacked_Progressive_Auto-Encoders_2014_CVPR_paper.pdf)

[2] Single Sample Face Recognition via Learning Deep Supervised Auto-Encoders (https://pdfs.semanticscholar.org/b11e/9eb1bd6b9a46f080aa0beb4ddf8fddcb80e7.pdf)

[3] Two-Dimensional PCA: A New Approach to Appearance-Based Face Representation and Recognition (http://ira.lib.polyu.edu.hk/bitstream/10397/190/1/137.pdf)

[4] http://ieeexplore.ieee.org/abstract/document/4270223/