166: A Face Authentication System

Human faces can be used for user authentication. Applications may cover e-commerce, elearning, system security, etc. The project aims to develop a software package with the following functions:

(1) a graphic user interface;

(2) capture images from a camera, and save images as graphic files;

(3) implement face detection algorithms;

(4) implement face recognition algorithms (concentrate on LDA);

(5) integrate face database;

(6) display recognition results showing rejection or acceptance.

Resources: PC with C/C++/Java

Keyphrase: A-FACE

Primary Supervisor: HW

Secondary Supervisor: JMF

Suitability: CS Requires Workshop: False

* Face analysis algorithms have been based on PCA/LDA/ICA

**PCA (Principal Component Analysis):**

Eigenface approach (research and ellaborate)

**LDA (Linear Detection Analysis)**