Interview Assignment - Image Classification

Overview

Build an image classifier that can differentiate between faces and non-faces.
Then present the results in detail.

Details

1. Download the MIT faces & non-faces dataset:
   http://www.ai.mit.edu/courses/6.899/lectures/faces.tar.gz
   It contains a training set and a test set, each containing faces & non-faces images.
2. Build a classifier to detect whether an image is a face or not.
   Train using the training set, and assess the classifier's performance using the test set.
3. Improve the performance of the classifier to your satisfaction.
4. Prepare a presentation of the work and the results:
   a. A block-diagram describing the final process
   b. How you got there - attempts taken and your observations
   c. Final results and accuracy measurements
   d. Analysis of mis-classifications
   e. Visualization of the computed features
   f. What can be done next: how it can be further improved
   g. The code
   h. Anything else to your choosing

Technical notes

1. Use any ML tool.
   However, assume that your resulting model needs to be integrated into a Python application,
   so please describe how this would be done.
2. Please produce high quality code, modularized, clean and documented.
3. Use GitHub to submit the code, presentation and results.
4. Schedule with us to meet in the office to present your work.

Please call any time if you have any questions about the task or requirements.
We're looking forward to hearing from you.

Thank you!