CIS581 Project 4: Face Replacement

- We will be implementing face replacement using MATLAB's built in tools, some functions of our own, and 3rd party toolboxes.

- Feature detection will mostly be done with toolboxes, we will write the blending and feature recognition functions ourselves
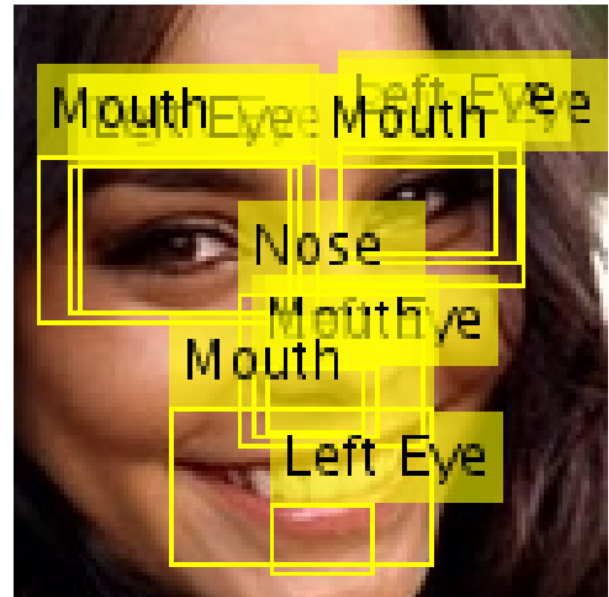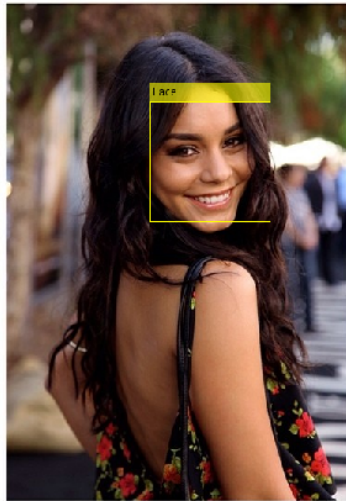
Feature Detection Plan

- Using MATLAB's pre-trained Viola-Jones functions, we will find faces and then the individual components of the face.

- Using the positions of the individual eyes, nose, and mouth, we will reject incomplete or incorrect faces using the k-fan model of the face and calculate the appropriate transform to our target face.

Blending and Warping

- We will warp using either TSP or a triangular mesh using the main face features as control points

- Blending will be done using gaussian and laplacian pyramids.

Face Detector Test

Pyramid Test