System tools. For the implementation of the application I used: C++, CMake 3.10.0-rc3, OpenCV 3.3.1, Visual Studio 2015.

The implementation of the application is done in a simple terminal environment where the user can interact with all the features of the program.
The end-user is able to perform one of the following actions:

- Insert learning data into SVM using predefined images.
- Check SVM on learning data.
- Check SVM on real time camera input.

More specifically, the data base on which the multiclass vector support engine operates consists of a table of 4556 total double values.

Diagram:
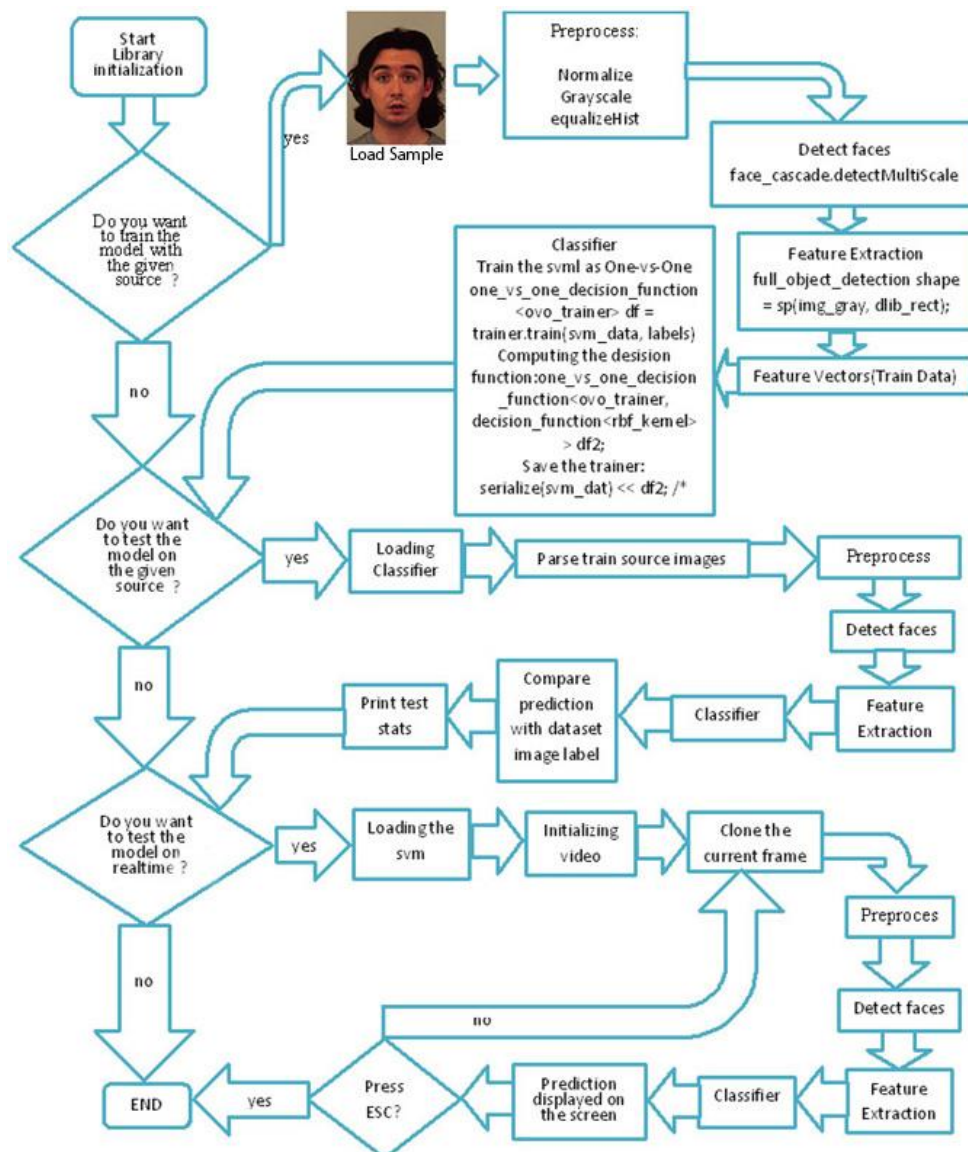
The application runs by giving it access to the 980 photos of the KDEF database from the Emotion lab at Karolinska Institutet.

The training lasted 2 hours and 27 minutes.

The success rate predicted by the classifier as shown in the following image is 99.2857% making a wrong prediction in 7 images out of 980.

Real time sample results as shown in the following image: