**SPIS’ FACES: Project Update**

Our project, SPIS’ Faces, is going well and we are moving faster than we both expected. Right now, we can run the program and it will open the webcam and identify and recognize both of our faces.

The development and coding of SPIS’ Faces was divided into two different sections. The first one involves accessing and obtaining live images from our web cam. On the other hand, the purpose of the second part is to train the program to recognize the faces within its scope.

As we go along, we have to do a lot of research, as this project involves coding that we have not quite been exposed to. Through the use of libraries like “CV2” we were able to access our camera. Once this was done, we needed to identify the faces, in other words, we needed the coordinates for the faces. This was achieved by applying several different cascades, specifically the “Haar Cascades”.

In order to tackle the second part of our project, we decided to utilize the “LBPH” (Local Binary Patterns Histograms) algorithm as our recognizer. This is due to the fact that LBPH works with pixels and we had more experience in that subject. Once we created the recognizer, we designed the training of this program. Several libraries were used to accomplish this goal. For example, Numpy and os, were used to manipulate images and files, respectively.

One of the features that we added to this program, is the ability to learn from its mistakes. When the program closes, it will ask the user to answer certain questions. If the prediction was not successful, then it will take a screenshot of the user and add it to the database. For example, if a user has never used the program before (then his face won’t be in the data base), SPIS’ Face will automatically create a new folder and store the screenshot in it.

One of the major challenges we face is the training time. On Monday, we reached our minimal viable product, detecting both our faces with acceptable accuracy. As we move along improving our program, we want to be able to detect more faces of people from SPIS, and make the training of the recognizer more efficient.