

Product Vision

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Description of Source Pictures.

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An easy to use command line tool to create a time lapse movie from a series of pictures.

Description of Source Pictures.

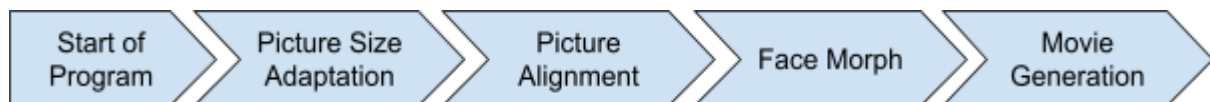
The pictures are stored in a local directory. The device which took the pictures is a digital camera. So the source pictures are of high resolution with a size of around 4 Megabyte each. The format of the pictures is JPG

The naming convention of the picture is following: prefix + a incrementing numerical value.JPG

On the picture itself there is, usually, the face of one person in the frontal view.

The size of the face and also the focal length might vary in a certain amount.

Process Description



Calling of the Program

The Program is called via command line and all necessary Parameters are parsed as arguments

Picture Size Adaptation

The pictures are loaded from a directory specified in an argument of the program and sized to a size which is also given as a command line argument. If this argument is missing then a default value is taken. The pictures will be resized in a way that the ratio is kept. The resized picture is stored in an additional directory also specified as a command line argument. The name of the files won't change.

Picture Alignment

The now resized pictures will be aligned to a reference picture whose name will be given as a command line parameter. If needed this reference picture will be resized also before. The

now aligned picture will be saved in another directory which is also given as a command line argument. The name of the files won't change.

Another command line argument specify if the aligned picture use an overlay. Overlay means that the picture to be aligned will have the previous aligned picture in background. The overlay argument is option. If not given the aligned picture will be saved as it is without combining to a previous picture.

Face Morph

In a further processing step the now aligned pictures are taken. for two subsequent pictures a morphing sequence according to landmark features is created. The Sequence of morphing between two pictures is controlled by following command line Parameters:

- Duration: The overall Duration of how long it takes to morph from one picture to another
- Pause: The Duration on how long the second picture, after the morphing is displayed until a new morphing sequence ist started (with this picture as starting picture)

When all pictures of the directory with aligned pictures have been pair wise morphed the final video is generated. The Video generation is controlled with following command line Parameters:

- fps: Frames per Second
- Output name: File Name of the movie to be generated.

Technologies

- The Final Product should be runnable on a typical Desktop PC
- As Programming Language C# is used
- As Development Tool Visual Studio 2022 Community Edition is used
- All used third party have to be free in usage