DATA.ML.300 Computer Vision
Exercise Bonus Round

For these exercises you will need Python. Return your answers as a pdf along with your modified code to Moodle. Exercise points will be granted after a teaching assistant has checked your answers. Returns done before the deadline will result in maximum of 3 points. Unlike with the normal exercises, you cannot earn any points from these exercises after the deadline.

Task 1. Lucas-Kanade optical flow (Programming exercise) (1.5 points)
Take a look at the code in the **optical_flow.py**. There is a Lucas-Kanade optical flow implemented and your task is to find optimal parameter values for the Shi-Tomasi corner detection and Lucas-Kanade optical flow for the series of Pac-Man images.
Your submission should include output images of your executed code.

Task 2. Face and smile detection (Programming exercise) (1.5 points)
Take a look at the code in the **cascade_detection.py**. There is an image of a man and your task is to follow the instructions and detect the man's smile and face using cascade classifier.
Your submission should include output images of your executed code.