Exercise for module A2I2 of at University of applied Studies in Rosenheim.

Exercise for lecture #12

Goal

Build your own image classifier by using available services. Export the model and integrate it in your own WebCam.

Build a *real-time* capture and classification application!

Prerequisits

In order to get this exercise working, **Tensorflow** and **OpenCV** are required. Since there are neither a Jupyter notebook nor a docker available, it is required to install both modules locally.

Try this:

```
$ pip3 install tensorflow or  pip install tensorflow
```

and

```
$ pip3 install opencv-python or  pip install opencv-python
```

Task

What is required for a classifier? - Correct, data.

- Collect some images of various things, e.g. pen, pencil, cards, glasses, mugs, etc. or find something outside, e.g. leaves of various trees or flowers. (**Minimum 3 different classes!**)
- Use https://teachablemachine.withgoogle.com/ (my recommendation!) to train your model and download it. You can also try to use customvision.ai or something else.
- Combine the code from the lecture with the one provided by **teachablemachine**.
- The goal: Let the WebCam work as a *real-time* classification device!

In case you prefer object detection, try customvision.ai!