Assignment no. 3

Neural Networks and Deep Learning
NDLEIL (FH Electives)
WS 2024/25

Exercise 4 (40 points) In the hands-on workshop on Nov 25, we trained a model for predicting the age of persons from face images. Based on the methods we developed in class, try to find a model that predicts age as well as possible. To this end, train at least *four models* with different architectures. What you do (e.g. more epochs, more/fewer layers, more/fewer neurons/filters, global pooling instead of flattening, pre-trained model with fine-tuning only, pre-trained model with adaptation of convolutional weights, etc.) is up to you. Your solution, however, should include at least one architecture based on a pre-trained model. Hand in the following:

1. Your best model (in terms of validation error) under the exact file name `Surname_FirstName.keras` (insert your name; no special characters!); Please do not upload the model file to Moodle! Instead, an upload link will be shared in class via Teams.
2. Your notebook and an HTML dump. The notebook must contain all model definitions and the corresponding outputs.

The best three models will receive three extra points.

Submission: electronically via Moodle; Deadline: Mon, Dec 9, 2024, 1:00pm.