# Group Yellow of the Egg

## 1.1.    Project Abstract

This project is part of System on Chips (SoC) Laboratory at Technical University (TU) Wien. The main object is to compare a digital signal processor (DSP) with an approximate DSP in a specific application. This will be a neural network.  We will investigate if it can compensate the approximation. Therefor we will implement a convolutional neural network (CNN) in an image processing application using MNIST data set. We will use the Zed Board. We will communicate via TCP. The task can be separated into three parts. First is the communication with the FPGA from the computer. Second is the DSP. There we need to find out which DSP is suited for the application and how to approximate and compare it. The main challenge will be to design and implement the neural network in hardware.

The project will be open-source and available on github.

## 1.2.    Hierarchy Chart

We decided to use a very flat hierarchy. The team consists of 5 persons. Since the topic of interest is new to all of us, we cannot write very complete requirements beforehand and will have to figure out a lot on the way. Basically, we will all work as developers. There will be weekly meetings within the team and monthly meetings between teams. A team leader is required. So far the structure can be described as in the following chart.

| Anton Team Leader | Benjamin Math Expert | Miha VHDL Expert | Lukas Xilinx Expert | Stefan SP Expert |