

## Federated Learning Coding Challenge

For the federated learning group you will be expected to have a good grasp of the various methods to train a deep learning topology using a distributed, data-parallel approach. We'd like you to use TensorFlow and code a classification model to train the CIFAR-10 dataset on CPU using a simple convolutional neural network of your choice (just a few layers; nothing fancy; we won't be concerned with the final accuracy of the model so you only need to show it is converging after 2-3 epochs). The training should be able to run on a single computer (without a GPU), but using 3 workers on that computer (i.e. 3 processes). Hint: Start with a single, non-distributed CNN to train on CIFAR-10 and then take advantage of data parallel frameworks, such as Horovod or tf.distribute to scale to multiple workers.

You are expected to provide a shared link for us to download the Docker image with your final set of scripts so that it can be run on our end and a simple README.md describing your approach and how to run your Docker.