



PRACTICAL COURSE

CS-C3240 - Machine Learning D

Si Zuo(si.zuo@aalto.fi)

2021.02.08



Goals

- Be able to know the basic usage of Tensorflow.
- Be able to construct neural network via Tensorflow.



Background

- Tensorflow:
 - open-source machine learning platform
 - Tensorflow 1.0.0 was released on February, 2017
 - Tensorflow 2.0.0 was released on September, 2019



Major changes

- from Tensorflow 1.0 to Tensorflow 2.0:
 - main idea: efficient and simple usage
- significant changes:
 - from graph execution to eager execution
 - eager execution: simplifies the model building experience
 - graph execution: provide optimizations that make models run faster with better memory efficiency
 - API Cleanup
 - API simplification by reducing duplication and removing deprecated endpoints
 - ...



Next

- go deeper into Tensorflow:
 - <https://www.tensorflow.org/tutorials/>
 - <https://github.com/tensorflow/tensorflow>
- youtube channel:
 - <https://www.youtube.com/channel/UC0rqucBdTuFTjJiefW5t-IQ>
- A beginner introduction to TensorFlow
 - <https://towardsdatascience.com/a-beginner-introduction-to-tensorflow-part-1-6d139e038278>
- Go deeper into keras in Tensorflow (tf.keras)
 - <https://www.tensorflow.org/guide/keras/>
 - https://www.tensorflow.org/api_docs/python/tf/keras/applications (pretrained model)