pre-defined: model architectures, data-sets, hyperparameters, optimizers, etc. Note that it is modular, as it implements a standard tensor-to-tensor interface.

> t2t-trainer \ --data_dir=\$DATA_DIR \ --problems=\$PROBLEM \ --model=\$MODEL \ --hparams_set=\$HPARAMS \ --output_dir=\$TRAIN_DIR

In the command you can set the model, the hyperparameters, the dataset, etc. and run the training to check how it performs.

The installation is very easy, consisting of just 3 lines.

Assumes tensorflow or tensorflow-gpu installed pip install tensor2tensor

Installs with tensorflow-gpu requirement
pip install tensor2tensor[tensorflow_gpu]

Installs with tensorflow (cpu) requirement pip install tensor2tensor[tensorflow]

References:

- 1. Olah & Carter, "Attention and Augmented Recurrent Neural Networks", Distill, 2016. Link 1, Link 2
- 2. <u>Github</u>
- 3. One Model To Learn Them All

We have reviewed the tools and research developments that made the Transformer possible, as well as applications and code snippets where appropriate: now, even readers with little or no background have read an overview of the field.