Platform

Ubuntu 16.04, Python 3.6, TensorFlow 1.1, scikit-learn 0.19

How to run

The entire process can easily be launched via the bash script “main”. This script performs all the required steps and reports the final result.

1) cd tensorflow
2) chmod +x *.sh
3) ./main.sh

The details

- Since the training process is naturally random, the model is trained 50 times. To speed up the training process, the 50 models are trained in parallel in 10 threads, 5 threads for for RNN model A and 5 for RNN model B. The required GPU memory for the entire process is less than 2 GB. After training the RNN models, we extract their predictions on the train data and use them to train the blend model.
- Finally, the test data is applied and the result is reported.
- The entire process takes few hours.

Folder Hierarchy

- The root folder includes the bash scripts that launch other scripts and the TensorFlow codes.
- The “codes” folder includes the TensorFlow codes and their error logs as well as the final output “finalResults.csv”.
- The “Data” folder includes the input data for the two RNN-based models A and B.
- The “preds” folder is used to store the predictions made by the RNN-based models. They are used as the input of the blend model.
- The TensorFlow models are saved in the “models” folder.