This shareware is the deep learning model proposed by manuscript Automatic Short Answer Grading via BERT-based Deep Neural Networks (ID TLT-2021-07-0194 in IEEE Transactions on Learning Technologies)

1. Software running platform: TensorFlow-gpu 2.2.0
2. Software Description:
3. bert4keras folder: the BERT model used, from https://github.com/bojone/bert4keras
4. dataset folder：contains the double-expanded Mohler dataset in the paper
5. capsule.py：contains the capsule network model used
6. ReadFile.py: preprocessing for SemEval-2013 dataset
7. TexasData.py: preprocessing for the Mohler dataset in NorthTexas
8. kfoldNorthTexas.py：Model for the Mohler dataset, using 12-fold cross-validation
9. NorthTexas.py：is used to evaluate multiple evaluation indicators for the Mohler dataset, including RMSE, MAE, Kappa, Pearson correlation coefficient, accuracy
10. SemEval.py：Model for the SemEval-2013 dataset, including measuring F1 value, accuracy, Kappa value
11. Software running: kfoldNorthTexas.py runs the model for the Mohler dataset, SemEval.py runs the model for the SemEval-2013 dataset
12. Other instructions:
13. The BERT initial parameters used by the model come from <https://storage.googleapis.com/bert_models/2020_02_20/uncased_L-12_H-768_A-12.zip>
14. The used SemEval-2013 dataset comes from <http://bit.ly/11a7QpP>
15. The used Mohler dataset comes from http://web.eecs.umich.edu/~mihalcea/downloads/ShortAnswerGrading\_v2.0.zip