Mr. Shunlin Lu

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EDUCATION BACKGROUND

University of Southern California (USC)   Jan.2020-Present
Master

- USC Viterbi School of Engineering   Major: Electrical Engineering (general)
- Cumulative GPA: 3.90   Intended Degree: Master of Engineering
- Related Courses: Reinforcement Learning, Mathematical Pattern Recognition, Machine Learning from Signals, Linear Algebra, Probability for Electrical & Computer Engineers, Database Systems

Wuhan University of Technology (WHUT)   Sep. 2015-Jun. 2019
Bachelor

- School of Information Engineering   Major: Electronic Information Technology
- Cumulative GPA: 3.65 /5.0   Degree: Bachelor of Engineering
- Related Courses: VC Programming B, Principles and Application of Single Chip Microcomputer, Embedded Microprocessor System, Data Structure and Algorithm, Fundamentals of Circuit Analysis, Fundamentals of Digital Electronic Circuits
- Honors & Awards: WHUT The Third-class Scholarship, The Second Prize in WHUT Robot Design Competition, The Winning Prize in WHUT Electronic Design Contest, WHUT Outstanding Student Leader, WHUT Merit Student

ACADEMIC PRACTICES

SVHN classification recognition   May.2021-Jun.2021

- This project uses the SVHN house number recognition data set, using the VGG model and the Resnet model respectively, after data preprocessing, data enhancement, using Adam as the optimization algorithm, training, testing, monitoring, saving weights, drawing, and model tuning.
- The project model is based on the classic model, and the corresponding blocks are extracted to adjust the model structure and continuously test.
- During the tunning phase, according to the performance of the model, increase the number of iterations, adjust batch_size, and change the learning rate to make the iteration more stable. Adjust the weight decay value through the parameters, adjust the Dropout layer and the BN layer, and use the early stop method to avoid the model overfitting. In the end, the Resnet model can get 97% accuracy on the test set.

Toxic Comments Classification Challenge   Jan.2021-Feb.2021

- The project is from Kaggle Toxic Comment Classification Challenge. Based on the text information, determine which of classes (toxic, severe_toxic, obscene, threat, insult, identity_hate, none) the text belongs to. This is a multi-classification problem based on text information.
- This project uses Object-Oriented Design preprocessor, trainer, predictor, and uses Yaml for parameter management.
- For preprocessing, this project deals with issues such as punctuation and capitalization in the text, using Count Vectorization and TF-IDF Vectorization in the naive Bayes model, and using embedding layer or pre-trained word embedding in neural network model.
- The project uses the naive Bayes model as the baseline, uses Glove Pre-trained word embedding combining with CNN, RNN, Transformer and other models to train the pre-processed information, predicts the classes on the prediction set, and submits it to Kaggle to get scores.
- Compare and analyze the results of each model, the Naive Bayes model as the baseline can get 0.84782 credits on Kaggle. The transformer has the best effect, which can get 0.9741 credits on Kaggle. The champion team got 0.98856 credits.

Member, WHUT Electrical and Electronic Experimental Center   Oct. 2016-Jun. 2018

- Selected as one of seventy students into the center and took part in some competitions.

LANGUAGE & PROFESSIONAL ABILITIES

- Programming language: Python, C++
- Skills: Pytorch, tensorflow, Matlab, Linux