




Tianyin Wang

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Education

South China University of Technology (SCUT)

Aug. 2019 - Jun. 2023

Major in Computer Science, School of Computer Science & Engineering

GPA 3.96 /4.0, Ranking 3 /175

Research Interests

My research interest is NLP, including information extraction (low resource) and text generation.

Research Experience

Unsupervised Relation Extraction SCUT

Aug. 2021 - Jun. 2022

- Topic: the usage of the noisy data, which is created by off-the-shelf zero-shot relation extraction(RE) models, to improve the zero-shot RE performance.

- Worked with Ziqian Zeng

Text Augmentation Via Vision translation [[Github](#)] [[Slides](#)] *University of Washington*

Apr. 2022 - Sept. 2022

- Topic: a novel method of text augmentation: using transfer learning, first map the text to the visual representation, then perform augmentation on it, and finally map it back to text representation and thus generate sentence-level text augmentation. For more details, please refer to the slides.

- Independent research, worked with Sheng Wang

Class-incremental learning in Relation Extraction SCUT

Sept. 2022 - present

- Topic and background: Class-Incremental/Continual learning does not receive much attention in NLP. Previous studies of class-incremental learning focus on NER tasks. However, previous learnt classes can be replayed in new samples since NER is a multi-label task. We are working on a solution that is capable for not revisiting any used classes and mitigating catastrophic forgetting events.

- Working with Ziqian Zeng

Publication

Learning from Silver Data for Zero-shot Relation Extraction

Publish: Under review in EMNLP (low resources track, reviewer scores: 3.5, 3.5, 3, 2.5).

Authors: First author.

Contributions:

- The major contribution is how to use silver data (i.e. noisy data created by off-the-shell RE model). The traditional way to use silver data is to use noise-aware algorithms on silver data. However, experimental results show that it is not the best way. We propose to detect clean data first, then use clean data to finetune the pretrained model, and finally use the finetuned model to perform inference. The experimental results show that our method can outperform the baseline by 11%.

**Due to the anonymity policy of EMNLP, the above is general information.*

Projects

LaTeX Equation Recognition [[Github](#)]

Nov. 2021- Dec. 2021

- It aims to train a model which can map an image of a LaTeX math equation to LaTeX code using ResNet as image encoder and Transformer layers as text decoder.

Auto Image Classifier [[Github](#)]

Aug. 2021- Sep. 2021

- It is a one-stop solution for image classification: after defining the subjects that need to be classified in a JSON file, the system will automatically scrap images for each class from Bing and use them to train a model for image classification. The web deployment of the model is also provided.

Online Store [[Github](#)]

Aug. 2021- Sep. 2021

- It is a web application based on springboot, mybatis and vue. It is an online shopping mall created for customers and

merchants. It contains all of the essential features of the common online store. The concise user interface also enables efficient shopping and store management.

Multimedia Player [\[Github\]](#)

Apr. 2022- Jun. 2022

- It is a robust and feature-packed media player based on FFmpeg, OpenGL, which can play a wide range of audio, and video files. Compared with traditional video-player, it has some advanced functions including video playback, video preview and sound wave visualization.

Skills

Programming Language: Python, C/C++, Java, JavaScript
Language: English(fluent, TOEFL:105, GRE:321), Chinese, Cantonese

Selected Awards

Awards

- Finalist (2.5%) in the 2021 Mathematical Contest in Modeling *Apr. 2021*

- Second Price in Contemporary Undergraduate Mathematical Contest in Modeling *Nov. 2021*

Scholarship

- The First Class of Science And Innovation Scholarship *Jul. 2022*

- The Second Class Scholarship *Oct. 2021*

- The Third Class of Cai Jianzhong Scholarship *Oct. 2020*