Tianyin Wang

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EDUCATION

South China University of Technology (SCUT)   *Aug. 2019 - Jul. 2023*

Major in Computer Science, School of Computer Science & Engineering

Overall GPA: 3.96/4.0;   Ranking: 3/170

➢ Main Modules: Data Structures, Computer Organization&Architecture, Operating System, Computer Network, Database System, Design and Analysis of Algorithm, Neural Networks and Deep Learning, Artificial Intelligence

HONOR & AWARDS

Scholarship

The Second Class Scholarship, SCUT   *Oct. 2021*

Chien-Chung Tsai Third Class Scholarship, SCUT   *Oct. 2020*

Science And Innovation Third Class Scholarship, SCUT   *Sep. 2020*

Awards

Finalist in the 2021 Mathematical Contest in Modeling   *Apr. 2021*

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

RESEARCH EXPERIENCE

Unsupervised Relation Extraction | SCUT   *Aug. 2021- Mar. 2022*

Advisor: Ziqian Zeng, Assistant Professor at SHIEN-MING WU School of Intelligent Engineering,SCUT

➢ Task: Given a context where two entities appear, the Relation Extraction (RE) task aims to predict the semantic relation (if any) holding between the two entities, and RE task is based on only needing a few examples (few-shot) or no examples (zero-shot).

➢ Main idea is to generate high confidence pseudo labels.

➢ The method is based on a combination of large-scale entailment models, noisy data detection, and entity typing methods (entity's type is crucial in RE).

➢ In our experience on TACRED and Wiki80, we attained 58% and 44% F1(micro) in zero-shot setting, respectively.

SELECTED PROJECTS

Neural Network Formula Recognition | SCUT   *Nov. 2021- Dec. 2021*

Advisor: Qianli Ma, professor and doctoral supervisor at School of Computer Science & Engineering,SCUT

➢ Task: Given images of mathematical formula then output their representations in LaTeX

➢ Used ResNet as encoder and a Transformer as decoder to build a network. Used Teacher Forcing to train

➢ Used Mask Language Model as a method to pretrain the model, performance improved

➢ Used Fastapi and Streamlit to build user interface and web service

Auto Image Classification Project | SCUT   *Nov. 2021- Dec. 2021*

Advisor: Xingling Zhang, associate professor at School of Computer Science & Engineering, SCUT

- ➢ Topic: Combination of web scraper and deep learning
- ➢ Input the categories that need to be classified, then related samples will be scraped from Bing and then be used to train a classifier based on ResNet
- ➢ Web service deployment base on flask and Nginx

Online Shopping Mall Project | SCUT   *Aug. 2021- Sep. 2021*

Advisor: Shehui Bu, professor at School of Computer Science & Engineering, SCUT
- ➢ Task: Built an online shopping mall for customers, merchants
- ➢ Goods information can be easily updated, customers and merchants can be informed timely
- ➢ Used Springboot to build Web application and used Vue to build user interface

ACTIVITIES

Internet Technology Center | member   *Nov. 2019 - Nov. 2020*
- ➢ Develop Web Applications. e.g. Applications for online quizzes
- ➢ Maintain Official website of the department

SKILLS

- ➢ **Language:** English (TOEFL total 92), Chinese (native), Cantonese (native)
- ➢ **Programming Languages:** C++, Python, Java, HTML, JS
- ➢ **Frameworks:** Pytorch, flask, transformers, Springboot, Vue