

TIANBAO XIE

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🎓 EDUCATION

Harbin Institute of Technology (HIT), Harbin, China 2018 - Present

BS. in Computer Science and Technology, Honor School, expected July 2022

GPA:3.94 (rank 1st in Honor School)

Marks of some selected lessons:

High-level Language Programming(C language based) 100*, Calculus 98, Linear Algebra 96.5, Discrete Mathematics 97*, Machine Learning 97*, Software Construction(Java based) 97*, Computer Architecture(CSAPP) 97.1* (*: rank 1st in 390 students in this course)

After my undergraduate, I will join the NLP Group of the Department of Computer Science at **the University of Hong Kong(HKU)** as a Ph.D. student in 2022 Fall guided by Prof. Tao Yu and Prof. Lingpeng Kong.

👨‍🔬 RESEARCH & PUBLICATIONS

The Natural Language Group of the University of Hong Kong, HKU June. 2021 – Present

Research Intern Under the guidance of Dr. Tao Yu and Dr. Lingpeng Kong.

Mainly focus on **Semantic Parsing**, **Question Answering** and **Structured Knowledge Grounding**.

Research Center for Social Computing and Information Retrieval, HIT Apr. 2020 – Present

Research Intern Under the guidance Ph.D. candidate Libo Qin and Prof. Wanxiang Che

Mainly focus on **Task Oriented Dialogue System** and **Spoken Language Understanding**[1][2][3].

Mass data computing center, HIT Oct.2019 – Feb. 2020

Research Intern Under the guidance of Prof. Hongzhi Wang

Mainly focus on **Error Detection** and **Reinforcement Learning** in Table Data.

Publications:

[1] Don't be Contradicted with Anything! CI-ToD: Towards Benchmarking Consistency for Task-oriented Dialogue System

Libo Qin, **Tianbao Xie**, Shijue Huang, Qiguang Chen, Xiao Xu, Wanxiang Che. In Proc. of Empirical Methods in Natural Language Processing (**EMNLP**) (Main track, long paper), 2021.

- Dig into the dialogue inconsistency problem in task oriented dialogue systems under the issue which Ph.D. Qin brought up, induce the different types and causes in inconsistency
- Design and carry out the data annotation procedures. By carefully designing the annotation procedures and UI interfaces, we reduce the pressure on the tagger while keeping the dataset reliable and available for following and extension.
- Write/adjust most of the code and do most of the baseline experiments on our proposed dataset. Participate in writing and reviewing of the paper.

[2] GL-GIN: Fast and Accurate Non-Autoregressive Model for Joint Multiple Intent Detection and Slot Filling. Libo Qin, Fuxuan Wei, **Tianbao Xie**, Wanxiang Che, Ting Liu. In Proc. of Annual Meeting of the Association for Computational Linguistics (**ACL**)(Main track, long paper), 2021.

- Participate in making improvement of graph modeling (locally-globally) to better capture the interactive information between intent and slot in multi-intent detection, make implementation in code.
- Reproduce and carry out experiments among SOTA models and writing corresponding parts in paper for clarifying that our model is exceeding others' in both performance and decoding speed.
- Fixing hyper-parameters(semi-auto) to make model perform better, writing corresponding parts in paper.

[3] A Survey on Spoken Language Understanding: Recent Advances and New Frontiers.

Libo Qin, **Tianbao Xie**, Wanxiang Che, Ting Liu. In Proc. of International Joint Conference on Artificial Intelligence (**IJCAI**)(Survey track), 2021.

- Follow papers in SLU field before and during this work, give them summarize and refine.
- Think of ways to generalize and arrange them in survey paper, try to get the general approach as well as new ideas behind their work to explain to our readers, and draw the taxonomy in tree diagram to make it even clearer.
- Write main body of the paper under the frame and guidance of Ph.D. Qin and Prof. Che.
- Act as the main contributor to the “Awesome-SLU-Survey” repository affiliated to the paper which gives comprehensive collation of datasets, papers, codes, and leaderboard in SLU field.

♥ HONORS AND AWARDS

National Scholarship, Twice (1.8%)	Ministry of Education, China, 2019&2020
First Prize Scholarship (2%),4 times	Harbin Institute of Technology, 2018-2020
CUMCM, First Prize	China Society for Industrial and Applied Mathematics, 2020
MCM, Meritorious Winner	Consortium for Mathematics and Its Application, America, 2020
Contest on Energy Saving & Emission Reduction, Second Prize	Ministry of Education, China, 2020
National English Competitions for College Student, Third Prize	IATEFL.TEFL,China,2019
Excellent Student Leader, Model (0.2%)	Harbin Institute of Technology, 2019&2020
Excellent Club Leader	MSRA, Academic cooperation Department,2020

(CUMCM is short for Contemporary Undergraduate Mathematical Contest in Modeling. MCM is short for Mathematical Contest in Modeling, while Contest on Energy Saving & Emission Reduction is short for National University Student Social Practice and Science Contest on Energy Saving & Emission Reduction)

📌 COMMUNITY WORK

Vice president of Technology in Microsoft Student Club, HIT Sep. 2019 - Present

Carried out/assisted many activities:

Work as a tutor in club-in-charged data science training, sharing experience of doing projects and research. Carry out activities like Hackthon, Software Free Day, Experience sharing lecture etc. with the help of MSRA.

GitHub and ZhiHu contributor Sep. 2019 - Present

Reading literature of cutting-edge/popular technology, including DL, pre-trained models, graph network etc., writing and publishing related collation, notes and code, one blog about PyTorch code paradigm has accumulated over **1.6k likes** on ZhiHu platform. One code collation repository “**NLP-Conferences-Code**” which we participate has received **1k stars** in GitHub. Our survey-affiliated open-source taxonomy repo “**Awesome-SLU-Survey**” has received over **400 stars** so far.

- Personal website: <https://tianbaoxie.com>
- GitHub: <https://github.com/Timothyxxx>

⚙️ SKILLS

- Programming Languages: Python, Java, C/C++
- Frameworks: PyTorch, Tensorflow
- Tools for NLP/DL: Huggingface-transformers, wandb, LTP, Fitlog, NNI
- Language Skills: English IELTS 7.0 (W 7.0), Chinese Native speaker
- Others and Soft Skills: LaTeX, Markdown, Linux, Shell, Anaconda