# TIANBAO XIE

West Dazhi St. No.92, Harbin, China • tianbaoxiexxx@gmail.com +86 17766519188

## EDUCATION

**Honor School of Harbin Institute of Technology (C9 League member)** **Sep.2018 - Now**
BS. in Computer Science and Technology GPA:3.94
(rank 1 in Honor School)

• 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)

## RESEARCH & PUBLICATIONS

**Research Intern** **Apr.2020 - Now**
Research Center for Social Computing and Information Retrieval(SCIR) , Harbin Institute of Technology, China
Guidance of Ph.D. candidate Libo Qin whose adviser is Prof. Wanxiang Che
***Participate in research program:***
Mainly focus on **Task Oriented Dialogue System** and **Spoken Language Understanding**. Participate in work of a multi-intent detection SLU model, a survey on SLU field and a cross-lingual pretrained method. Work concludes following cutting-edge research and discussing ideas, realizing ideas (data processing, model construction and debug) by PyTorch, carrying out experiments (hyperparameter optimization, result judgment and collection, code adjustment) on it as well as writing thesis. Currently, I am participating in a research of consistency in a task-oriented dialog system.

**Research Intern** **Oct.2019 – Feb. 2020**
Mass data computing center, Harbin Institute of Technology, China
Guidance of Prof. Hongzhi Wang
***Learn fundamental knowledge, cross the threshold:***
Mainly focus on **Error Detection in Data.** Participate in paper reproduction of error detection system (Raha, KATARA etc.), practicing skills in research level project development. Learnt elementary knowledge in machine learning methods, deep learning as well as deep-learning framework like PyTorch, Tensorflow and Keras. Start to learn program-driven learning and paper reading .

***Publications:***
[1] **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. It is under review in Proc. of ACL, 2021. (Accepted)
• 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.
[2] **A Survey on Spoken Language Understanding: Recent Advances and New Frontiers**.
Libo Qin, **Tianbao Xie**, Wanxiang Che, Ting Liu. In Proc. of IJCAI(Survey track), 2021.(Accepted)
• 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.

## 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 League Member, Model (0.1%), Group photo with principal — Harbin Institute of Technology, 2019
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 National University Student Social Practice and Science Contest on Energy Saving & Emission Reduction)

## SKILLS

Programming Languages: Python, Java, C/C++
Frameworks: PyTorch, Tensorflow
Tools for NLP/DL: Huggingface-transformers, LTP, fitlog, NNI
Others and Soft Skills: LaTex, Markdown, Linux, Shell, Anaconda

## COMMUNITY WORK

**Vice president of Technology** **Sep. 2019 - Now**
Microsoft Student Club, Harbin Institute of Technology, China
Guidance of Prof. Hongzhi Wang
***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 - Now**
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 **100 stars** so far.