Duzhen Zhang

95 Zhongguancun East Road, Haidian District, Beijing 100190, China
zhangduzhen2019@ia.ac.cn • +86 13552134696 • https://bladedancer957.github.io/

EDUCATION

Institute of Automation, Chinese Academy of Sciences (CASIA)
Ph.D. in School of Artificial Intelligence — Sep 2019 – Jun 2024

- Adviser: Prof. Bo Xu (the director of CASIA), Prof. Tielin Zhang
- Focus:
  (1) Emotion Analysis in Conversational Systems (Paper [1][2][3][4]);
  (2) Brain-inspired Intelligence, Spiking Neural Networks (Paper [5][6][7][13]);
  (3) Continual Learning in Information Extraction (Paper [8][9][10][11][14][15]);
  (4) Multi-Modal Learning, Large Language Models (Paper [12][16]);

Shandong University (SDU, Jinan)
B.Eng. in Software Engineering — Sep 2015 – Jun 2019

PUBLICATIONS

ACCEPTED PAPERS

(*** denotes equal contribution.**)

[1] **Duzhen Zhang**, Xiuyi Chen, Shuang Xu and Bo Xu, "*Knowledge Aware Emotion Recognition in Textual Conversations via Multi-Task Incremental Transformer*", in Proceedings of the 28th International Conference on Computational Linguistics (**COLING'2020, Oral**).

[2] **Duzhen Zhang**, Zhen Yang, Fandong Meng, Xiuyi Chen and Jie Zhou, "*TSAM: A Two-Stream Attention Model for Causal Emotion Entailment*", in Proceedings of the 29th International Conference On Computational Linguistics (**COLING'2022, Oral**).

[3] **Duzhen Zhang**, Feilong Chen, Jianlong Chang, Xiuyi Chen and Qi Tian, "*Structure Aware Multi-Graph Network for Multi-Modal Emotion Recognition in Conversations*", IEEE Transactions on MultiMedia (**TMM, SCI, IF:7.3**).

[4] **Duzhen Zhang**, Feilong Chen and Xiuyi Chen, "*DualGATs: Dual Graph Attention Networks for Emotion Recognition in Conversations*", in Proceedings of the 61st Annual Meeting of the Association for Computational Linguistics (**ACL'2023, main conference**).

[5] **Duzhen Zhang**, Tielin Zhang, Shuncheng Jia and Bo Xu, "*Multi-scale Dynamic Coding improved Spiking Actor Network for Reinforcement Learning*", in Proceedings of the 36th Association for the Advancement of Artificial Intelligence (**AAAI'2022, Oral**).

[6] **Duzhen Zhang**, Shuncheng Jia and Qingyu Wang, "*Recent Advances and New Frontiers in Spiking Neural Networks*", in Proceedings of the 31st International Joint Conference on Artificial Intelligence (**IJCAI'2022**).

[7] **Duzhen Zhang**, Tielin Zhang, Shuncheng Jia, Qingyu Wang and Bo Xu, "*Tuning Synaptic Connections instead of Weights by Genetic Algorithm in Spiking Policy Network*", Machine Intelligence Research (**MIR, ESCI**).

[8] **Duzhen Zhang**, Yahan Yu, Feilong Chen and Xiuyi Chen, "*Decomposing Logits Distillation for Incremental Named Entity Recognition*", in Proceedings of the 46th International ACM SIGIR Conference on Research and Development in Information Retrieval (**SIGIR'2023**).

[9] **Duzhen Zhang**, Hongliu Li, Wei Cong, Rongtao Xu, Jiahua Dong and Xiuyi Chen, "*Task Relation Distillation and Prototypical Pseudo Label for Continual Named Entity Recognition*", in Proceedings of the 32nd ACM International Conference on Information and Knowledge Management (**CIKM'2023, Oral**).

[10] **Duzhen Zhang**, Wei Cong, Jiahua Dong, Yahan Yu, Xiuyi Chen, Yonggang Zhang and Zhen Fang, "*Continual Named Entity Recognition without Catastrophic Forgetting*", in Proceedings of the 2023 Conference on Empirical Methods in Natural Language Processing (**EMNLP'2023, main conference**).

[11] Jiahua Dong*, **Duzhen Zhang***, Yang Cong, Wei Cong, Henghui Ding and Dengxin Dai, "*Federated Incremental Semantic Segmentation*", the IEEE/CVF Conference on Computer Vision and Pattern Recognition 2023 (**CVPR'2023**).

[12] Feilong Chen*, **Duzhen Zhang***, Minglun Han, Xiuyi Chen, Jing Shi, Shuang Xu and Bo Xu, "*VLP: A Survey on Vision-Language Pre-training*", Machine Intelligence Research (**MIR, ESCI**).

UNDER REVIEW

[13] **Duzhen Zhang**, Qingyu Wang, Tielin Zhang and Bo Xu, "*Biologically-Plausible Topology Improved Spiking Actor Network for Efficient Deep Reinforcement Learning*", International Joint Conference on Neural Networks (**IJCNN'2024**).

[14] Yahan Yu*, **Duzhen Zhang***, Xiuyi Chen and Chenhui Chu, "*Flexible Weight Tuning and Weight Fusion Strategies for Continual Named Entity Recognition*", in Proceedings of the 62nd Annual Meeting of the Association for Computational Linguistics (**ACL'2024**).

[15] **Duzhen Zhang**, Yahan Yu, Wei Cong, Xiuyi Chen and Jiahua Dong, "*Federated Incremental Named Entity Recognition*", in Proceedings of the 62nd Annual Meeting of the Association for Computational Linguistics (**ACL'2024**).

[16] **Duzhen Zhang**, Yahan Yu, Chenxing Li, Jiahua Dong, Dan Su, Chenhui Chu and Dong Yu "*MM-LLMs: Recent Advances in MultiModal Large Language Models*", in Proceedings of the 62nd Annual Meeting of the Association for Computational Linguistics (**ACL'2024**).

INTERN EXPERIENCE

Natural Language Processing Center, Technology Group (TEG), Tencent
Research Engineering Intern — May 2020 – Aug 2020

- Mentor: Dr. Suncong Zheng
- Worked on Neural Chinese Word Segmentation incorporating Prior Vocabulary Knowledge
- By incorporating prior knowledge of the dictionary into the neural Chinese word segmentation model, problems related to OOV and cross-domain word segmentation have been alleviated. This function has been launched into Tencent's internal basic NLP tool "QQSeg".

Pattern Recognition Center, Weixin Group (WXG), Tencent
Research Intern — Mar 2021 – Aug 2021

- Mentor: Dr. Zhen Yang and Dr. Fandong Meng
- Worked on Emotion Anayasis in Conversations
- The outcomes were accepted by COLING'22.

Search Strategy Department, Baidu
Research Intern — Apr 2023 – Jul 2023

- Mentor: Dr. Xiuyi Chen
- Worked on Incremental Learning and LLM Inference Acceleration
- The outcomes were accepted by CIKM'23.

AWARDS & SCHOLARSHIPS

- First Prize Scholarship for Outstanding Students of Shandong University — Sep 2017
- Second Prize in the National College English Contest — Apr 2018
- Second Prize of National College Student Mathematics Competition — Oct 2017
- Second Prize Scholarship of Institute of Automation, Chinese Academy of Sciences — Dec 2022

IT SKILLS

- Programming language: Python > C++ == C == Shell > Java
- Deep learning framework: Pytorch > Tensorflow

[*CV compiled on 2024-02-28*]